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Outdoor Photographer

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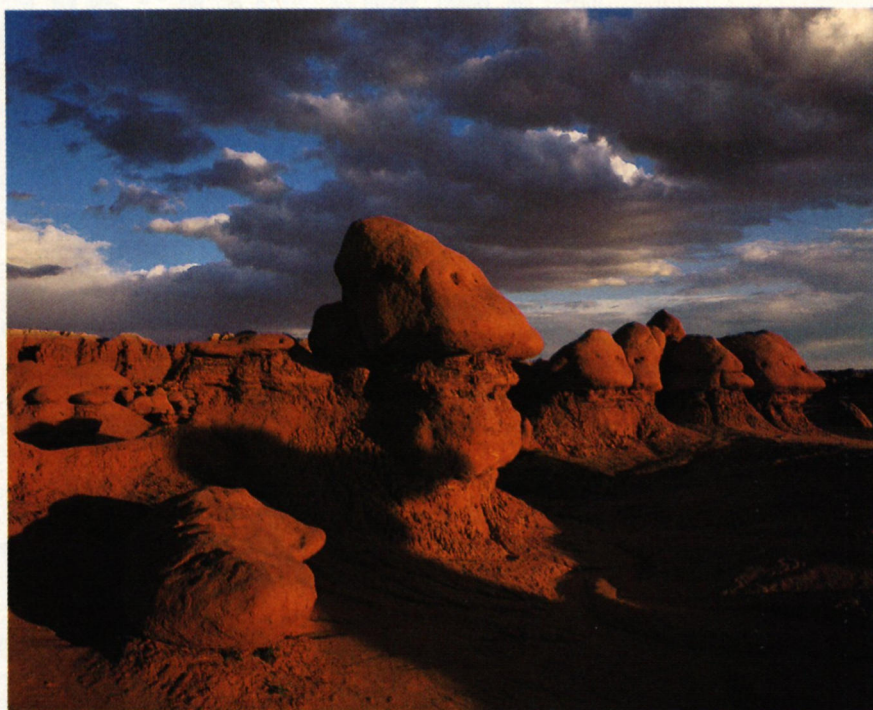
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SIGMA



OUR WORLD

A Landscape Unchanged Since the Time of Genghis Kahn – Naadam Festival in Mongolia.

Masanori Kobayashi: Born 1949, Kyoto. Specializes in documentary subjects including refugee children around the world. Winner of the United Nations Photographer's Award in 1994. Currently works as a freelance photojournalist.

Photo Data: Sigma 70-200mm f/2.8 EX HSM; exposed for 1/500 sec. at f/8.

MASANORI KOBAYASHI SHOOTS THE WORLD WITH A SIGMA LENS

Since ancient times, the horse-riding peoples of Mongolia have led a nomadic existence across the vast, grassy plains of northern Asia. Here, the photographer captures a moment of unbridled joy during an annual festival, through the eye of his Sigma lens. "I'm really impressed with its operational ease and mobility," says Kobayashi.

The Sigma APO 70-200mm f/2.8 EX HSM lens delivers excellent, edge-to-edge image quality, even at wide-open aperture settings and throughout the zoom range. Balance and handling are perfectly stable as the length of the lens remains constant, even while zooming and focusing. And the hypersonic motor provides quiet, high-speed autofocus response. A fixed, non-rotating front ring makes polarizing filter

use simple, and a detachable tripod mount is included as standard equipment. This 70-200mm zoom uses Sigma's dedicated 1.4X and 2X APO Teleconverters.

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O U R W O R L D

A Discerning Eye Can Find Beauty by the Side of the Road - On the Old Road to Ohtarumi-tohge. Osamu Miyake, born 1932, Tokyo. Graduated from Tokyo University of Foreign Language. Became a freelance photographer specializing in mountaineering, after working as a magazine editor. He has represented the Japanese Alpine Photographers Group for 13 years, since its establishment. Currently shoots a variety of natural subjects including plants, insects and animals. Photo data: Sigma Macro 50mm F2.8 EX, shot at 1/8 sec. at f/4

OSAMU MIYAKE SHOOTS THE WORLD WITH A SIGMA LENS

A spring rain was falling on Takao Mountain. In the fading rays of the sun, tiny chrysosplenium bloomed by the roadside. Miyake captured this delicate flower in soft ambient light through the eye of his Sigma lens.

The Sigma 50mm f/2.8 EX Macro and Sigma 105 f/2.8 EX Macro floating lens systems offer superb definition across a broad focus range, from infinity through 1:1 (life-size) Macro. They deliver excellent results for both crisp compositions and natural looking backgrounds. A straight-drive focusing system and screw-in hood make polarizing filter adjustment easy. These features and other Sigma optical advances, including an exceptional depth-of-field at f/45 (f/32 for Nikon and Pentax) make these lenses ideal for a wide variety of applications, from nature photography to portraits.

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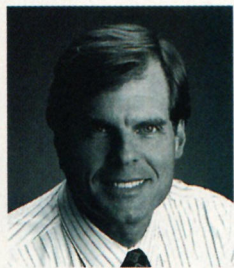
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My father, who was an editor of automotive magazines in the '50s and '60s (*Motor Life* and *Motor Trend*), liked to relate an anecdote about how long it took Detroit—with its archaic outside-in wiper system that left a big “V” in the center of the windshield—to adopt the then more European tandem swinging blades that are the standard today. Later, when we made some of our early family trips to Europe, we’d wonder why our spray-and-wipe gas station attendants back home didn’t use squeegees

on windshields as they did on the Continent.

I’m playfully reminded of such examples of American ego-centrist thinking as they distantly pertain to landscape photography, which is another subject area that can be egotistically thought of as “ours” as much as automaking. For this season’s treatise on winter light and the land, we’ve turned to Scandinavian photographer, Jan Tove. I don’t wish to sound like a jaded and defensive editor, but I know there will be a handful of readers who will question how a landscape across the Atlantic can pertain to their endeavors here at home. Tove provides a particularly delightful, almost contemplative look at how the light, which can be quite distinctive at this time of the year, can be exploited by the camera and film. Some-

times soft under a veiled overcast or low winter sun, sometimes crystalline on a cold, clear day, winter light can be some of the year’s best. Who better to recognize this than a photographer schooled in the land of the midnight sun. If you can’t sell snow to the Eskimos (or more PC, the Inuits), you can’t teach a Swedish photographer much about putting it on film. We find his work positively



Ever exuberant about his wildlife subjects and the painstaking process of his assignments, Michael Nichols takes you behind the scenes of his multi-year tiger project for the National Geographic.

inspirational, and are only frustrated by how long we’ll have to wait for the white stuff to come to California. (Then again, we learned long ago from contributors like surfing specialist Woody Woodworth that some of the best light for surf-and-sand scenery isn’t, as most assume, in the summer).

Speaking of midnight sun, “Get out and stay out” is a slogan used by the manufacturers of Gore-Tex™ products, but it could very easily be the motto of those like Tove who reside in parts of the world where leaves turn in September and cold rains don’t stop until May. We address the need to make the most of this nearly two-thirds of the year with our “Gear Up For Winter” feature. With the aid of these photo and apparel products, cold weather can become something to embrace rather than avoid.

Finally, check out the how-to review on *f*-stops and shutter speeds. We hope that you won’t overlook the essence of this refresher course on the fundamentals of making an exposure that’s more than just a judgment related to the quantity of light that reaches your film. Whether you were raised on automatic cameras or have simply become a slave to “program” and should know better, making good use of the “A,” “S” and “M” modes will bring about a rebirth in the quality of your images.

—Steve Werner, Editorial Director



Photographer: Michael Nichols

Subject: Siberian tigers

Equipment: Canon EOS-1N, Canon EF 600mm *f*/4L, Kodak Ektachrome E100SW pushed one stop

Situation: The expanse of Siberia is over 1000 square miles. In that vast territory, you’re looking for well-camouflaged animals that go out of their way to avoid being seen. I went there to concentrate on environmental and population issues related to Siberian tigers.

People have been under the impression that these tigers were teetering on the very edge of extinction—maybe fewer than 100 animals left. Newer studies, though, are estimating the population to be around 400. They’re at these low numbers and are forced to range over such a wide territory because their prey has been so decimated. To save the tigers and keep a healthy population, that has to change.

This mother was “wild caught” and now, along with her cubs, lives in a five-acre enclosure at the Siberian Tiger Project of the Hornocker Wildlife Research Institute. The photo appears grainy because of the countless snowflakes falling between the tigers and the 600mm lens and is only partly due to the film which, under other circumstances, is very fine-grained.

Editor’s Note: You may not have this photograph on the cover of your copy of *Outdoor Photographer* as we’re conducting a study in certain parts of the country with a different cover. You can find this Michael Nichols’ image on our Web site. The address is www.outdoorphotographer.com.

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Maximum Autumn

You printed an article by Jim Clark on West Virginia in the fall that really got me going ("Maximum Autumn," October, 1998). It was an inspiration. Although I live close enough to that state to drive, I've never thought about it as having fall photographic possibilities. Mr. Clark's images showed me that I've been overlooking some incredible nearby opportunities. (I've since purchased the book, which I love.) *Out-*



door Photographer always finds a way to make me consider things I haven't thought about before. Please keep it up.

Gregory Cavanaugh
Washington, D.C.

The Sun Also Rises

I can't say enough about John Netherton's Focus On Nature column in the October issue, "Sunrise, Sunset." I've been preoccupied with shooting pictures of sunsets as long as I've been taking pictures. I've bored my extended family with slide after slide of sunset pictures in vacation slide shows. I've never done much with sunrises, mostly due to a fondness for sleep but, after reading this column, I'm going to start. Thanks, John!

Peter Unger
Austin, Texas

Basic Jones

I never get enough of Dewitt Jones' columns. I was disappointed to see that his column will only be in every other issue. The Basic Jones column in the October issue was one of the best. Every day we learn more and more about life. Like Dewitt, I learn about life through my photography. Trying to find a new way of looking at the world from the sum experience of our lives is what photography is all about.

Name withheld
Via e-mail

Enthusiasm!

I'm an amateur photographer who has subscribed to *Outdoor Photographer* for about a year, and I love it. I love the photographs and the articles. I just wanted to let you know that your magazine is a truly wonderful source of information for people like me who are just starting to learn the art of photography.

Kimberley Overby
Manchester, New Hampshire

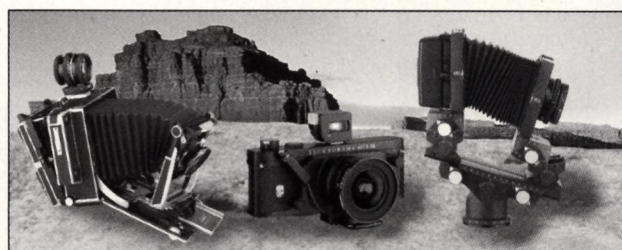


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In The Pursuit Of Wildlife

The September issue of your magazine really hit home on a couple of issues. The digital camera and the computer (using a scanner) really do change the direction of one's photographic work. Tied in with the Internet, one can do a wide range of things that weren't possible just three or four years ago. I find that I can do things right at home that I used to have to send

out to the lab. "Let The Image Sing" really hit home, as I plan to do some serious image manipulation work.

The Tui de Roy article, "Wild Child Wildlife," was also interesting. I've spent a number of years observing bald eagles at Pymatuning State Park and Hartstown Swamps, among other places. I've found that I've had to adapt in a number of ways to the challenge of obtaining pictures. The

environments are always changing, nests disappear, and it's generally difficult just trying to keep track of where the birds are locating themselves. Reading about Tui de Roy's pursuit of similar subjects and seeing her dramatic results was inspirational.

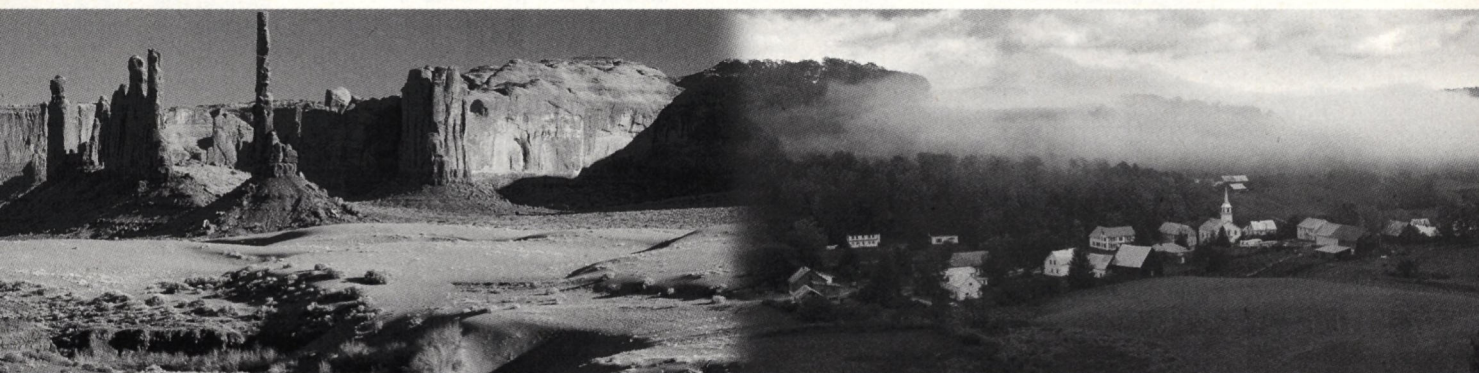
John Sims
Euclid, Ohio

Errata

In the "Superior Control" article in the September issue of *OP*, we gave an incorrect Internet address for the Mahans. The correct address is www.sweetwatervisions.com.

In Galen Rowell's column in the October issue, the Northeast Greenland National Park is described as being half the size of Texas. In fact, the huge park is one and a half times the size of Texas.

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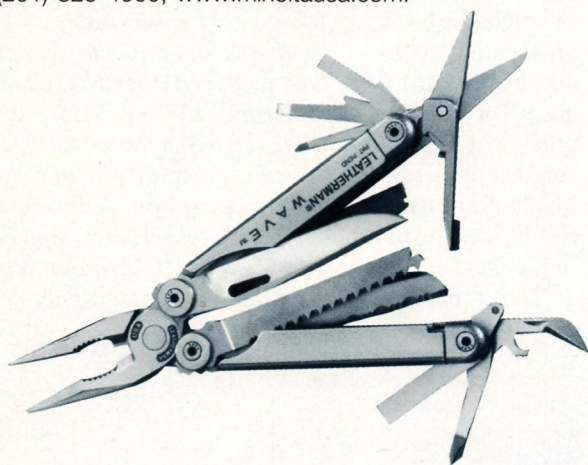
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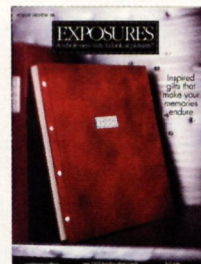


Leatherman's Latest

Replace your field tool kit with this all-in-one problem solver, the Wave, Leatherman's latest stainless-steel multi-tool. The Wave features 17 tools in all, including needlenose pliers, three locking blades and five screwdrivers in a design that collapses to just four inches in length. Best of all are the new rounded handles, making this the most comfortable Leatherman ever. **Contact:** Leatherman Tools, (800) 847-8665, www.leatherman.com.

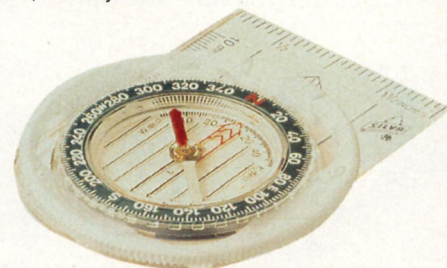
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Covert Operations

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Ektachrome Gets Intense

For maximum color saturation, try Kodak's new Ektachrome E100VS. It's balanced for daylight and adds extra punch to colors, making it ideal for many outdoor uses when color intensity is vital. E100VS also features a T-grain emulsion for excellent sharpness. This 100-speed film can be pushed up to a full stop and is available in 35mm, 120, 220 and sheet formats. **Contact:** Kodak, (800) 235-6325, www.kodak.com/go/professional.

Contax Makes Medium-Format?

Here's a new autofocus medium-format system featuring Carl Zeiss optics. **The Contax 645 SLR system delivers six ultrasonic autofocus lenses and a 2.5 fps motordriven film advance, making it viable for serious wildlife work.** The system also boasts a fast focal plane shutter speed of $\frac{1}{4000}$ sec., unparalleled in medium-format equipment. **Contact:** Contax, (800) 526-0266, www.contaxcameras.com.

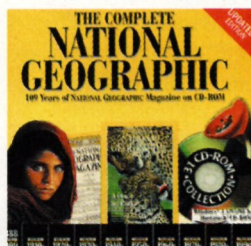


Big Gear, No Problem

You'll find ample room for big zoom lenses, camera bodies and accessories in Domke's new J-3 bag. Nine compartments and pockets

mean room for everything: multiple lenses, flashes, film

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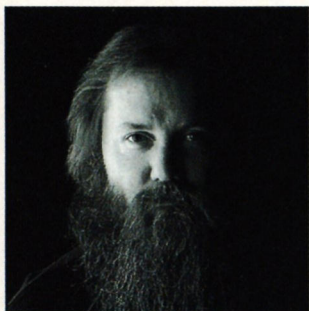
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Moving Animals, Changing Technology

Without a doubt, autofocus has changed wildlife photography

BY JOHN NETHERTON

Wildlife photography continues to change with the latest advances in technology. Today, the speed of autofocus lenses with top-of-the-line cameras easily surpasses our ability to focus a lens manually. Sure, I've always been able to get a few sharp frames while panning and manually focusing the lens, but nothing like I get now. Using my Nikon F5 with a 500mm AFS Nikkor lens, I'm able to achieve sharp focus on 95 percent of my subjects. The five percent I lose are usually due to my failure to anticipate an animal's movements when it zigs as I zag.

To follow a snowy egret flying over Mrazek Pond in Everglades National Park, for example, I'll first mount the 500mm lens on a Studio ballhead or a Wimberley with a Kirk quick-release plate attached to the lens collar. My tripod of choice is a Gitzo or Manfrotto, fully extended to eye level to prevent the stooping you see so many photographers resorting to—which certainly isn't helping their backs.

I pan with the bird and follow its movements as it drops to the water for an instant and then returns to the air, sometimes in wildly erratic displays of acrobatics. My shutter speeds vary with the intensity of the ambient light, but I prefer at least $\frac{1}{500}$ sec. when photographing birds in flight.

When setting up my equipment in an area where I anticipate an animal in motion will enter the picture and I hope to capture its movement across the frame, I set the camera on continuous AF mode. With this set-

ting, the animal will stay sharply focused as it moves across the frame. This method worked exceptionally well when I recently photographed a North American badger as it entered a rolling, rocky area between clumps of grasses. The focus stayed crisp and sharp as the badger made its way across the grassy area and began digging in its burrow.

Many photographers are bothered by older cameras, which set their autofocus on dead center. This, it readily becomes apparent, creates problems with creative composition if you're trying to achieve sharp focus. Many of the newest cameras, such as the F5, Canon's EOS 3 and Minolta's XTsi, allow sharp focus in separate areas of the frame, which can be selected by the camera or manually by you.



You can tell which area has been selected, as one of the small rectangles in the frame will change.

It's easier to use zoom lenses when photographing action in the autofocus mode. When using a zoom and focusing manually, you have to turn and push and pull the lens to change the focus and the desired focal length of the lens. Some lenses, such as the 70-180mm Micro-Nikkor, have two separate collars for focusing and for changing the focal length, which makes it almost essential to use autofocus in photographing fast action.

Recently, while photographing a captive mountain lion running toward me, I used the 70-180mm lens set on 180mm in the first few frames and

widened the focal length as the animal got closer—to ensure I didn't crop off part of the cat. Here, lower light allowed only a $\frac{1}{250}$ sec. shutter speed—which, however, proved quite adequate for stopping the mountain lion's movements. Every frame was in sharp focus as the cat came progressively closer and closer—so close, in fact, that I could no longer follow it in my viewfinder as it ran by.

As an animal moves nearer, a faster focus is required. This is when the new lenses with built-in motors prove ideal, such as Nikon's AFS, Canon's USM and Sigma's HSM lenses. The new 80-200mm Nikkor AFS lens wasn't available during this recent shoot of the mountain lion, but it would have allowed for even faster autofocus.

Because motordrives on cameras are faster than ever, I try to anticipate the amount of time an animal will require to complete its burst of movement across the scene. At eight fps, a roll of 36-exposure film can be used up in just a little more than four seconds. So I set the motordrive to con-

tinuous high and hold down the shutter-release button only when the action is particularly fast-paced.

For instance, one moment a mountain lion may be running at a slight trot, but if it's really excited about catching its prey, it might burst across the scene in a matter of seconds. Make sure you're not close to the end of your roll of film when trying to capture such types of behavior because inevitably you'll run out of film just at the height of the most interesting action. If I've shot 28 frames and I notice an animal is pausing to clean itself, I'll readily sacrifice eight frames and change to a new roll of film.

Without a doubt, autofocus has changed my wildlife photography. Today, I find myself photographing more action and considerably more of my subjects' interesting behavior. Anticipating each animal's behavioral characteristics and patterns of activity is essential to knowing how to follow it with a camera, but I now wonder how I ever got along without today's autofocus cameras and lenses. **OP**



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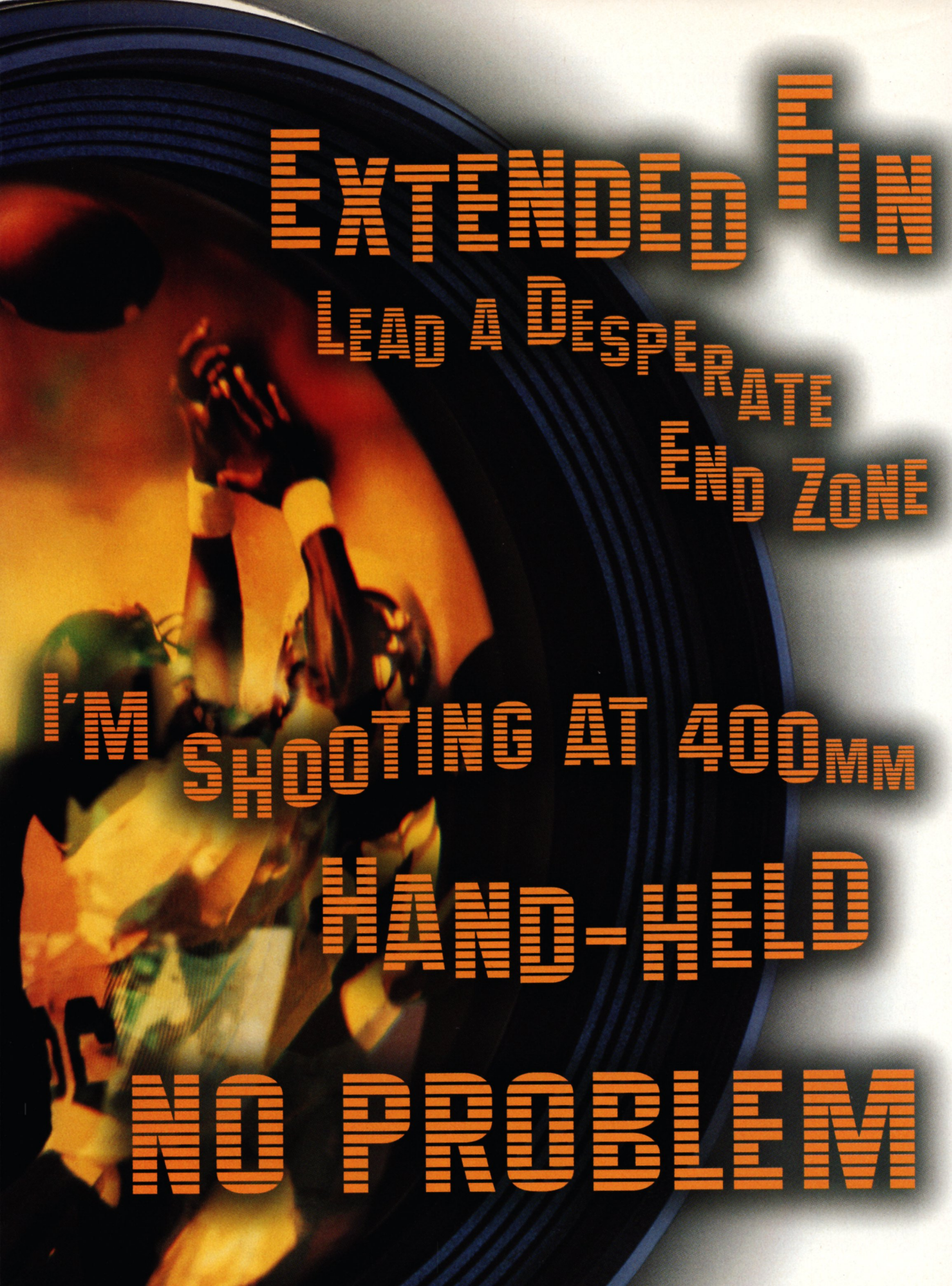
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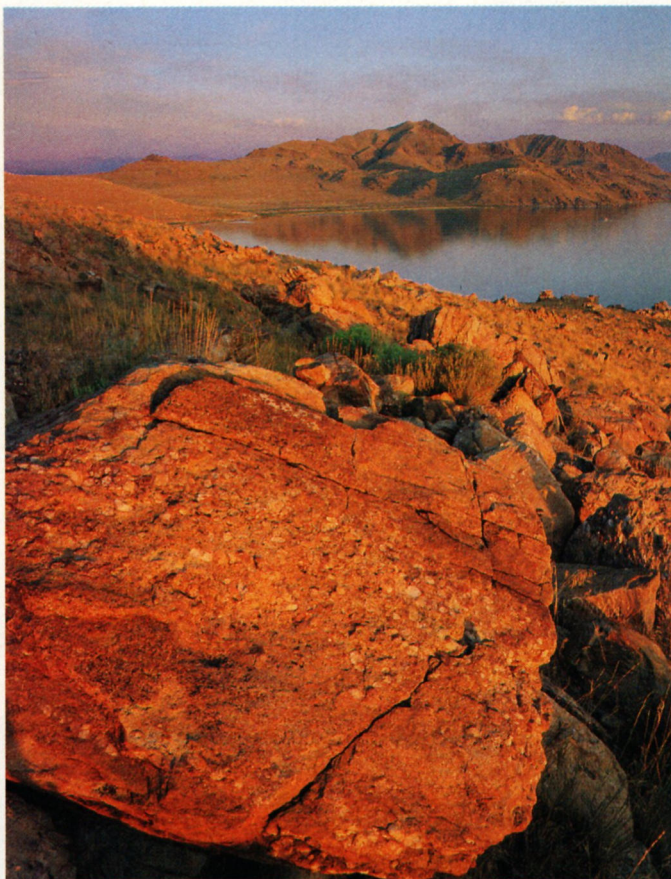
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Favorite Places

Antelope Island, Utah



LOCATION: Rising thousands of feet above the metallic waters of the Great Salt Lake lies the spine of Antelope Island. Set aside as Antelope Island State Park, this remarkable wilderness of more than 28,000 acres sits close to the cities of the Wasatch Front. It's connected to the mainland by a seven-mile causeway off Interstate 15, a half-hour north of Salt Lake City, Utah.

Nature photographers and outdoor enthusiasts relish the possibilities here, as golden grasslands interlace with interesting rock formations on the flanks of Daddy Stump Ridge, which rises far above the surrounding lake. In the spring, wildflowers grow in profusion, and the blooms of several species of cactus brighten the otherwise desolate scenery.

Antelope Island is the easternmost mountain range of the Basin and Range Geological Province, a huge area lying between the Wasatch Mountains of Utah and the Sierra Nevada of California. The region is characterized by mountain ranges and intervening valleys created tens of millions of years ago when western

North America was forming. Ancient shorelines of the huge Lake Bonneville, which covered the area 10,000 years ago, are clearly visible here.

In 1845, John C. Fremont and Kit Carson apparently were the first non-indigenous people to visit the island. The first permanent resident, Fielding Garr, arrived in 1848 and was soon asked by Brigham Young, the leader of the Mormons, to manage their herds. Private ranching dominated the island until state acquisition in 1981.

Wildlife abounds here, as the state maintains a herd of about 550 bison, which freely roam the island. Pronghorn antelope, bighorn sheep, coyotes, bobcats, badgers, porcupines, jackrabbits and a variety of rodents are also found. The region is home to a startling number of migrating and nesting birds, with avocets, stilts, willets, burrowing owls, curlews, grebes and several species of raptors seen regularly. There are rattlesnakes in the park, so watch where you put your hands and step carefully.

WEATHER: Summers are hot, with temperatures typically reaching over 90 degrees every day. Fall and spring are possibly the best times to visit, although summer thunderstorms produce dramatic lighting, rainbows and lightning displays. Winter snows, which melt rapidly under the sun, add a dramatic flair and can enhance your landscape images.

PHOTO EXPERIENCE: Excellent landscape possibilities are all over the island, with beaches, grasslands and rocky headlands lending themselves to wide-angle lenses such as 24mm or 35mm on a 35mm camera. I use a 90mm or 75mm on a 4x5 camera for foreground detail in the landscape. Telephoto lenses, such as 80-200mm zooms, bring the abundant wildlife into close focus and are critical to

photographing bison, which are dangerous to approach.

Sunrise and sunset are equally spectacular here and produce rich, warm tones on grasses and rocks. If you're lucky enough to visit during a full moon, you'll find it rising over the Wasatch Mountains on the east side of the lake. Both the sun and moon are often reflected in the lake waters, which are so rich in dissolved metals that it's truly mirror-like when calm. A telephoto lens can radically foreshorten your scene and create dramatic effects.

Several trails allow access by foot, bike or horse to infrequently visited areas of the park, and there's ample opportunity to photograph bike or horse riders in action. On several weekends each year, the original homestead ranch is open to the public. A primitive campground allows easy access to early morning and late evening photographic opportunities.

For more information, contact: Antelope Island State Park, 4528 W. 1700 South, Syracuse, UT 84075-6868, (801) 773-2941, (801) 721-9569.

OP



UTAH

BEST TIMES Open year-round, Antelope Island State Park is an ideal wildlife and scenic photo destination in spring and fall. Spring brings displays of wildflowers, green grasses and huge clumps of flowering cacti. By July, the colors are muted gold and bronze, but the sun setting over the huge lake warms them to even richer tones. However, the atmospherics of summer and winter can make those seasons a good time to create stunning landscapes.

Text And Photography By Robert Hildebrand

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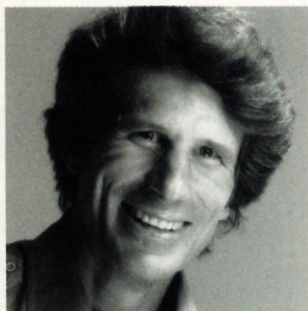
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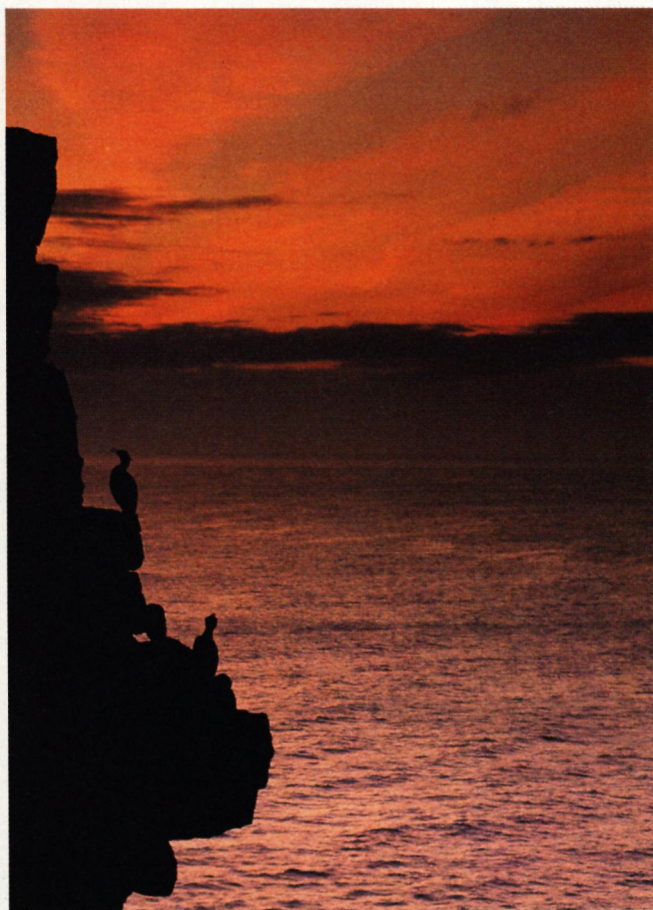
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The Unforgiving Pribilofs

A wet, cold, treeless place
harbors a great diversity of wildlife

BY GALEN ROWELL



I can't begin to apply any of the usual platitudes of travel writing to the Pribilof Islands, nor can I explain why I feel so satisfied with my recent visit to such an uncomfortable, abnormal, expensive place. The answer is deeply rooted in my obsession for photography—my personal quest to extract beauty from even the most unforgiving surroundings. If you share it, you, too, may be destined for the Pribilofs.

Most of you read these words in the comfort of some sort of artificial subtropical microclimate that replicates the evolutionary cradle of humanity. It has become the norm in every developed nation. On the other hand, the kiss of death for modern journalism is normalcy. Even the simplest story gets a spin. Tabloids feed off the secret satisfaction of normal people in the common tribulations of the famous or the rare afflictions of the lesser known.

This magazine focuses on the more lofty, yet equally strange aberrations of humans who transport their bodies into habitats to which they're not adapted. These odd beings go to great effort, expense and physical discomfort to wallow through malarial swamps, dive under the sea or scramble onto icy heights to bring back images that illustrate their separateness from normal. Many of them lust for close encounters with bears throughout America's last frontiers, the very thing their ancestors tried to avoid at all costs.

Yet the extremes that published nature photographs appear to depict rarely represent the actual human experience. The majority of extreme images are made from or near mobile subtropical environments. Drive-by shootings around Yellowstone or Churchill account for the majority of bear imagery. Comfy cruises bring photographers face to face with penguins.

Where the climate and access are ideal, as in the Galapagos Islands and the Serengeti Plains, photo tourism especially flourishes. Visitation radically drops off where photographers have to enter uncomfortable environments for extended periods of time. The world's greatest concentration of wildlife is in just such a place—the



netherlands called the Mother of Storms by Arctic sailors, between the Gulf of Alaska and the Bering Sea.

Fifty times fewer photographers visit the Pribilof Islands than go to the Galapagos. Hundreds of miles apart from the Aleutian chain, these islands remained uninhabited until the 18th century, even though Aleut Indians had reached them by sea kayak and found millions of northern fur seals, hundreds of thousands of sea otters and Stellar sea lions, plus more than one million nesting seabirds of tremendous diversity. Still, rather than live in such a wet, windy, cold and treeless place, the Aleuts paddled back hundreds of miles across open ocean.

The Pribilofs' lack of trees is due to a huge dip in a line drawn by climatologists to define Arctic conditions. The 50 degree F summer isotherm drops below the Pribilofs at 57 degrees latitude (just a few hundred miles north of London), while it arcs well above the true Arctic Circle in Alaska, Siberia and Scandinavia, favoring forests and native people. With just three clear days a month, morning summer temperatures in the 30s and frequent gale-force winds that average 17 mph year-round, the Pribilofs are a virtual blueprint for hypothermia.

In 1786, Russians searching for the breeding grounds of the fur seal "discovered" the Pribilofs. With heaven hidden by eternal clouds and the czar far away, they enslaved Aleuts from more hospitable islands to harvest Pribilof furs for them. More than 2.5 million seals were killed during the first 30 years. The Aleuts, too, began dying off from white man's diseases and a climate unfit for survival. Their agony didn't end with the 1867 sale of Alaska. As virtual slaves of the U.S. Fish and Wildlife Service, the Aleuts were kept on the islands to harvest furs until after World War II. But that's another story.

The same Alaska Native Claims Settlement Act of 1971 that ended one of the least known and most sordid chapters of our government's mismanagement also opened the door for nature photographers. Extensive lands and dollars were signed over to the disenfranchised natives. An Aleut village corporation was set up that operates St. Paul Island Tours, (800) 544-2248.

Today's Pribilof visitor must have special access to alternative transport and lodgings or buy a tour that includes a Reeve Aleutian Airways turboprop flight from Anchorage, 800 miles out into the Bering Sea. Since the Aleuts control the islands (except for seal colony management by the feds), luggage is conveniently checked all the way into the lobby of St. Paul's only hotel. The stark, old dining room

is now a warm sitting room with books and videos. Meals are served in the galley of a fish processing company. The all-you-can-eat medley of prime rib, steaks, jumbo shrimp, salmon, halibut and mashed potatoes more than matches the high caloric burn rate of photographing in the wind and cold.

Daily guided bus trips to bird cliffs and seal colonies are optional after the

(Cont'd on page 109)



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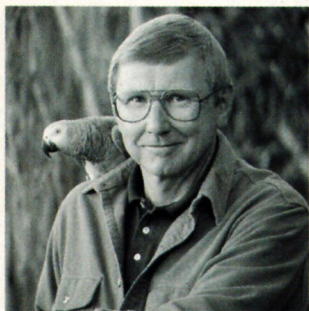
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T-Shirt Wisdom

Kimo's Rules • Adopted Rules Of Thumb
Copyright Issues

BY GEORGE LEPP

No Rain, No Rainbows

Nature photography isn't just about fancy equipment and great technique, even though they might help to bring back some better images. Sometimes approaching photography and life with some Dewittisms (after Dewitt Jones) will make us better persons and, in the end, improve our image—both of them.

On a recent photographic trip to the island of Kauai, I came across a T-shirt with some poignant sayings on it. The wording on the T-shirt is called Kimo's Rules and outlines some day-to-day rules to live by. Here are those rules and a few of my comments.

1. Never judge a day by the weather. How many times have we looked out at crummy weather and thought our photography was done for the day, but instead we went out and captured some of our best images ever?

2. The best things in life aren't things. We get wrapped up in our toys (oops, make sure you call them tools!) when often just being in the locations we seek out could be enough.

3. Tell the truth—there's less to remember. This one hits the mark in today's world! It works closer to home, too!

4. Speak softly and wear a loud shirt. Hawaii is a good place to follow this axiom, but it goes further than that in letting our actions say more than our boasts.

5. Goals are deceptive—the unaimed arrow never misses. We all have goals and should pursue them. Be careful of your actions to reach those goals, for if you tempt fate, too often it happens.

6. He who dies with the most toys—still dies. This is a great takeoff on a popular saying and refers back to Kimo's Rule #2.

7. Age is relative—when you're over the hill, you pick up speed. Ever notice how fast time flies after 40? It's hard to keep up with after 50, and I don't know if I can keep pace, but I'm about to find out.

8. There are two ways to be rich—make more or desire less. Being a professional photographer means I need to work on the second part.

9. Beauty is internal—looks mean nothing. You mean all that work at the gym is for nothing? We can all do more to spruce up our inner beauty.

10. No rain—no rainbows. I'm not much for wearing T-shirts with logos or messages, but this one has been fun and elicited numerous comments from people around me. I spent several days going through every T-shirt shop in Kauai looking for Kimo's Rules after seeing it at the beginning of the trip and not buying it at the time. I found it again on the last day before returning home.

My 10 Adopted Rules Of Thumb

These aren't my original rules, as I found them on a poster in the gift shop of the Memorial Art Gallery in Rochester, N.Y. The author of the poster is Wendell Castle. Just like I don't usually wear T-shirts with messages, nor do I allow bumper stickers on my vehicles, and my office doesn't have signs around with messages to live by—yet I was compelled to buy and put up this poster. I'd like to share it with you. Again, I've added a few comments.

1. If you are in love with an idea, you are no judge of its beauty or value. This is why someone else (my wife, Arlie) does all the negotiating of fees for my photographs. I'd give it away just so I could do it. She reminds





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TECH TIPS

me that we have to eat.

2. It is difficult to see the whole picture when you are inside the frame. This works in life as well as photography. Sometimes we need to step back.

3. After learning the tricks of the trade, don't think you know the trade. Wow! Does this ever talk to the professional side of photography. Experience still shows in our images.

4. We hear and apprehend what we already know. In the days of new technology, we better be reaching beyond the comfort of old ways.

5. The dog that stays on the porch will find no bones. This speaks to the previous rule of thumb. The yard has many bones in it; we're just going to have to do some digging.

6. Never state a problem to yourself in the same terms it was brought to you.

7. If it's offbeat or surprising, it's probably useful. I'll go with this to a degree. Still, we sometimes reject traditional methods too quickly and embrace new things just because they're different. There's a lot of bad photography out there that's being published and exalted only because it's different (weird).

8. If you do not expect the unexpected, you will not find it. I think this addresses the need to keep an open mind. It also means to keep the correct aperture and shutter speed set on your camera at all times. Autofocus also helps. Don't forget fresh batteries.

9. Don't get too serious. I keep hearing stories of photographers who get into shoving matches and the like over who's in whose place to get a photograph. This is all too much fun to take too seriously.

10. If you hit the bull's-eye every time, the target is too near. Keep reaching out there and trying new things. This whole computer/digital thing is enough to place the bull's-eye almost to where we can't see it.

So there you have it. Some simple words to live and photograph by. My thanks to Kimo and Wendell.

The Rest Of The Story

I hope some of you read this and said, "How can George republish these words when they aren't his? The T-shirt and poster must be copyrighted."

It would have been easy to publish Kimo's Rules and Castle's Rules of

Thumb without taking the time to get permission. What are the chances of them finding out? In today's information age, the chances are better than you might think. When republishing someone's creative work, from photography to words to music, the right thing to do is try to get permission. My staff spent a lot of time on the phone researching how to find Kimo and Mr. Castle. Their efforts were successful, and both generously agreed to allow me to reprint their intellectual property.

Kimo's Rules is copyrighted by Nite Owl T-Shirts (1991), and you can get the shirt or notecards with the rules (without my comments) by calling (888) 430-9907. Wendell Castle's poster is also copyrighted (1990) and available from Wendell Castle, Inc., 18 Maple St., Scottsville, NY 14546, (716) 889-2378.

Peacock Panoramic

The image that accompanies this column relates back to Rule of Thumb #8. Photographing flowers at a garden in Kauai, Darrel Gulin and I came across this peacock that wanted to display for hours. He didn't care if we were just inches from the front of his erect and shimmering feathers. He wasn't what we expected, but we spent a lot of time and film on him.

This is a composite panorama where I've taken two images and composited them together in Adobe Photoshop (check out my newly redone Web site on how to do this). To get the two images, I used a Canon EF 300mm f/4L Image Stabilizer lens and quickly photographed the bird with the head in the right part of the frame and then again with the head in the left part of the frame.

In the computer, I had to decide which head was best. The film used was Kodak's new Ektachrome Professional E100VS (Vivid Saturation). Yes, I could have done this by cropping a 35mm shot, but the image would have been small. I can actually print this as an image three feet wide! Don't try that with a cropped shot. **OP**

If you have any tips or questions, address them to: **OUTDOOR PHOTOGRAPHER**, Dept TT, George Lepp, 12121 Wilshire Blvd., Suite 1200, Los Angeles, CA 90025-1175 or on the Internet at www.leppphoto.com.

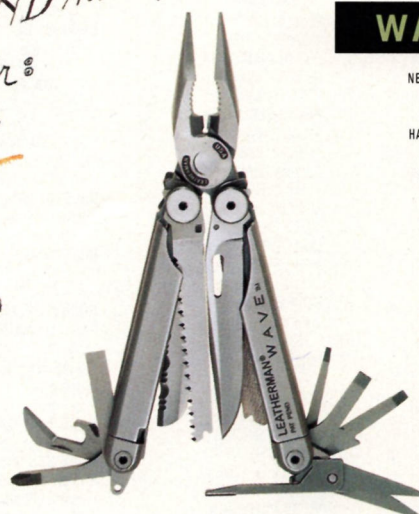
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*Out of control, the truck plunged into twelve feet of water. The terrified passenger couldn't escape as water filled the cab around her. Responding to the rescue call, I dove down to the vehicle. I saw a woman trapped inside. Quickly, I broke the window. Then I reached for the **LEATHERMAN** TOOL that's always at my side. I flipped open the serrated blade with one hand. It sliced right through the rugged seat belt. ONLY then was I able to pull her free. AND now for the best part of this letter: She recovered FULLY.*



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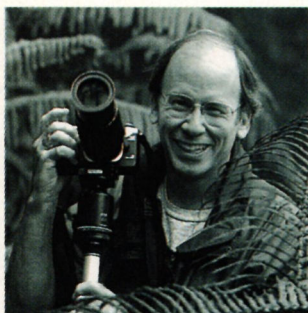
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Fire On The Horizon

A digital camera proves to be an exciting photographic experience

BY DEWITT JONES



It began on Sunday. An errant cigarette tossed from a car; a conscious deed of a demented soul; an act of God—it didn't matter, it began. The moment the spark touched the tinder-dry grass, it was out of control. Those who saw the fire first tried to stop it, but island god Pele had returned to scorch the slopes of Molokai. People fought with garden hoses from their rooftops; the hospital was evacuated.

From my house upcountry, the crisis in Kaunakakai appeared as just a wisp of smoke. Rising from behind Red Hill, I didn't even notice it at first. When the gray fumes finally billowed high enough to reach my consciousness, I said to Lynette, "Looks like another fire, I'm sure the volunteers are on it," and went back to working in the yard.

By that evening, the battle of Kaunakakai had been won. Miraculously, not a building had been lost. The fire had now spread out wildly in three directions from the little town by the sea. It raged on, but to those in town, it was no longer a threat. At my house, smoke now filled the entire sky. "It must be huge," I said, grabbing my cameras and setting up a tripod on the front porch. In my bag was a new Canon PowerShot A5 digital camera. I'd hardly used it.

After I took a roll with my 35mm cameras, I picked up

the digital and clicked—well, not really, better I beeped and green flashed—off a few frames. The LED screen instantly showed me the results of my efforts and, as I stared at images on that little screen, I began to think how much digital photography paralled the fire burning just beyond Red Hill.

For how many years had the fire of digital been smoldering or perhaps raging somewhere beyond my sight? Products had been built, manufactured, become obsolete and died, technology had advanced, images had zipped through phone lines, all somewhere at the edge of my peripheral vision. I had been only dimly aware of a conflagration that would eventually redefine the landscape of photography. Now I held it in my hand and, like the smoke clouds on the horizon, the reality of it began to sink in.

That night, a phalanx of crimson flames licked and leaped into the darkness below our house. Lynette and I traded watches, a handful of cherished belongings packed in the car should we have to evacuate.

I distracted myself by sending the digital images I had taken that day to friends on the Internet. "Send now" I'd click, and instantly 20 of my compatriots would have the potential to experience what I had seen just hours before. My father called to make sure I was okay, and we chatted in amazement, not only about the fire itself, but about the



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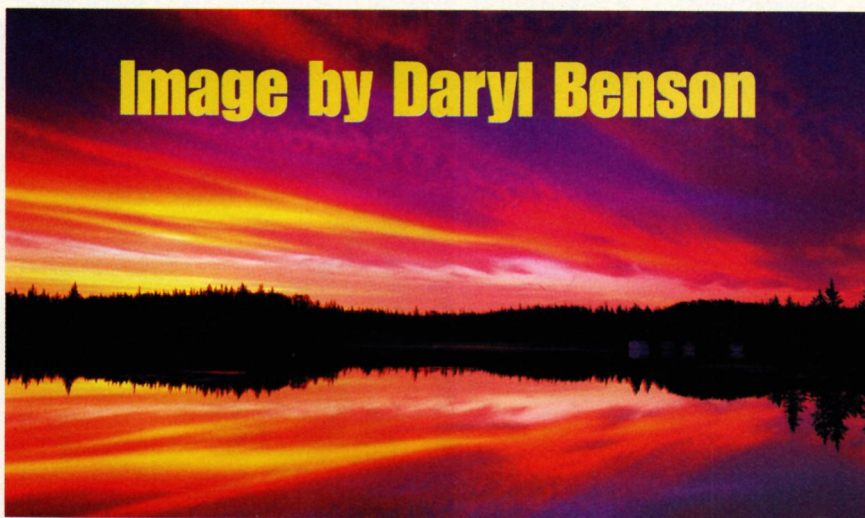
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technology that allowed us both to view it at the same time.

The next day I was consumed by the fire and my digital images. By early morning, I'd even read all the documentation (a sure sign that something had gotten my attention!) and was busily combining shots with PhotoStitch and adjusting them in Photoshop. Flushed with excitement, I headed for the local fire station, grabbed a photo of some of the men, turned it into a magazine cover with a banner proclaiming "Island Thanks Molokai's Finest!" and had it posted on their bulletin board when they returned that evening. They loved it, and we talked about the image in the same way folks had years ago when Polaroid film first came out.

From my vantage point, fire and digital was all there was. Yet I was beginning to get a handle on the second and the firefighters were starting to control the first. By evening, they'd brought the fire to its knees at the last road that served as a break between the fire and my house. I was there with all my cameras, dancing on the edge of the conflagration, delighting in beauty that the change of fire had brought to the landscape. I shot with my 35mm. I also shot with the digital camera. Now it, too, was in my control.

I printed more images on my inkjet for the men at the firehouse, dispatched them over the Internet, even sent several to Outdoor Photographer for this month's column (no trips to the lab, no waiting).

The fire burned on for almost a week. The flames had passed us now, just as they had earlier moved on from Kaunakakai. But my landscape—both geographic and photographic—was forever changed. As I write this column, my Canon PowerShot A5 sits on my desk, downloading images into my computer. My photography will never be the same.

Have you noticed digital smoke on your horizon? Keep an eye out for it. The fires of change are close behind. **OR**

Check out Dewitt's new book, *The Nature of Leadership*, in this issue's holiday book guide as well as his next seminar in Hawaii in the *Travel & Workshops* section.

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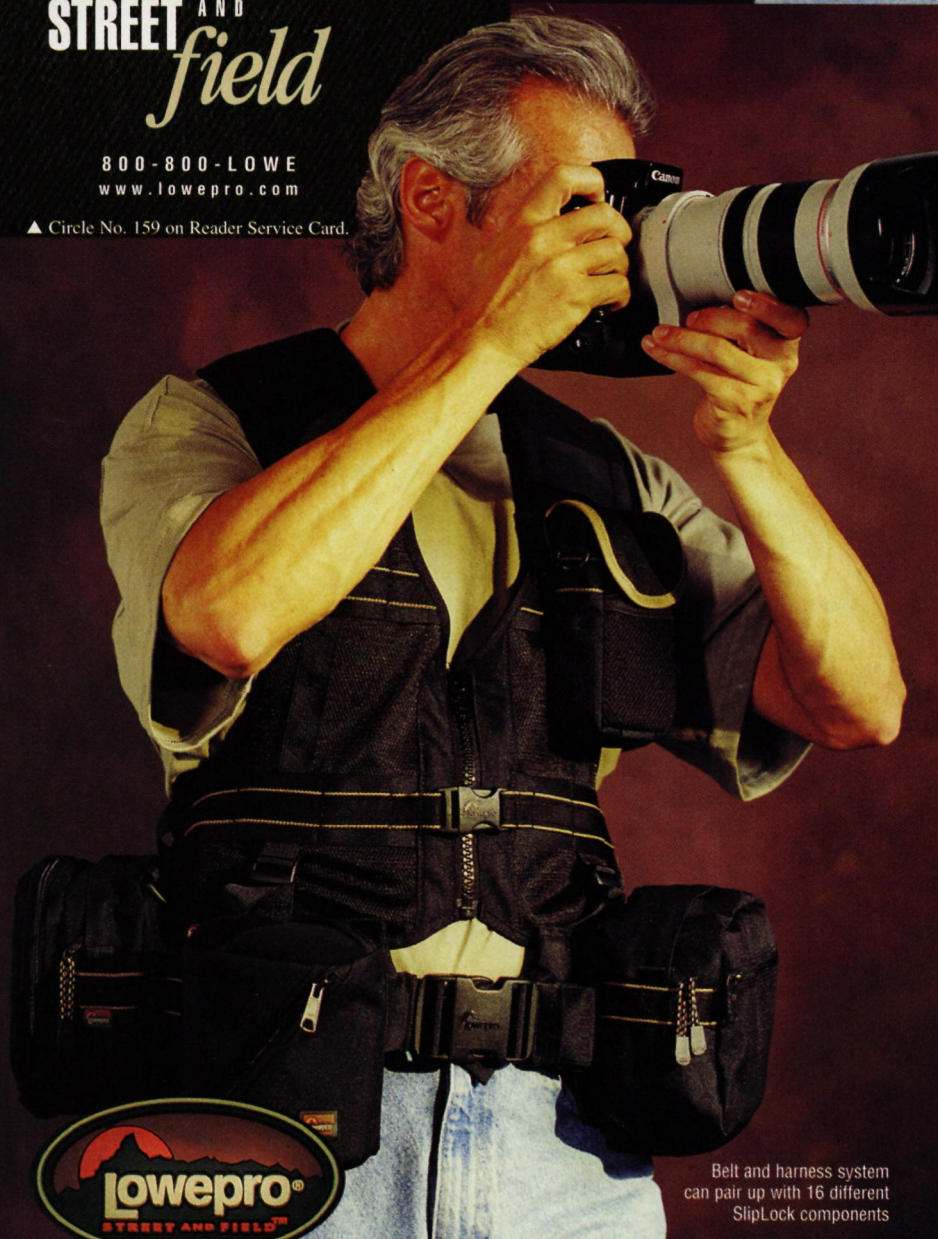
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No Guts, No Glory!

Find your inner vision from
the edge of your mental landscape

BY LISL DENNIS



Travel photography and skiing take me to the edge of being and to the outer geographical limits—if I let them. Got busted for skiing out of bounds at the Santa Fe Ski Basin; got breathless for hiking in ski boots to over 12,000 feet above Kachina Peak to shoot the Taos Valley view and run the bowls after a big dump. No guts, no glory!

The explorer/risk-taker in me is a rapt reader of historical and contemporary adventure travel books and expedition magazine articles. The 1996 Mount Everest disaster put two page-turners on the bestseller list: Jon Krakauer's *Into Thin Air*, and the late Anatoli Boukreev's and G. Weston DeWalt's *The Climb*. In the Everest aftermath, ongoing magazine articles have attempted to explain the psychodynamics of the edge imperative to armchair explorers.

So far I've not come across a profoundly satisfactory investigation into the edge imperative. I welcome readers to write me in care of *Outdoor Photographer* with their insights on the subject.

As for me, I've got a touch of the edge imperative, Peter Pan syndrome, whatever, which plays out in travel photography, skiing, hiking and trekking. Mostly it plays out in

fantasies—flying upside down through never-never land—and bugs me with envy of others who have had more opportunities than I for adventure travel depth plunges.

Nevertheless, I've found that depth plunge travel photography engenders some of the same edgy ingredients: exploring geographical terra incognita, suspending oneself in exoticism, supporting disorientation, trusting our footsteps in culture, road testing alternative selves, flirting with fear, sensing the appropriate response and taking creative leaps of faith.

Recently, I took an inner leap of faith on a wilderness adventure with a high emotional grunt factor and a net gain in grace. I participated in

a retreat conducted by Buddhist priest Joan Halifax from Upaya, a Zen Peace Institute in Santa Fe. After two days of group facilitation, Native American rituals and thorough outdoor skills training, I found my ecological niche along the Chama River where I'd solo without benefit of food or companionship for four nights.

The retreat was only seemingly similar to my negative experience with the Outward Bound approach of overcoming the wilderness with the coincidental metaphor for everyday life. The more feminine Upaya intent—subscribed to by an equal number of men and women in my group—is to equip individuals through emotional, not physical, trust in others through ritual and rites of passage, tears, meditation and prayer to take on their inner turf within the bosom of nature.

At basecamp on the Chama, standing in a stone circle before dawn on day one, surrounded by my retreat family, Joan Halifax graced me with an aromatic, sage smudge stick send-off, invoking all the senses. She gave me a custom-made mandate to explore my inner landscape with as much vision as I bring to travel photography.

Over the next four days and nights, I discovered that



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without the distractions of mandatory geographical conquests, I walked mindfully about five to seven hours a day on near empty. Cheating with two Balance Bars over four days and a steady stream of water spiked with E-mergen-C electrolyte replacement, I thrived with no social demands, no cameras, no culinary outline, no deadlines—only a vow to return safely to basecamp. A lot of galaxy and novel gazing was accomplished under the New Mexico sky.

Screening the imagery of the inner landscape during early morning walking meditations, I also sighted and watched out for rattlers, bear, elk, deer, coyote and weird daydreams. Sleeping through the mad dog and Englishman midday sun, I topped off each day with extended open-air zazen at my riverside campsite. The mindful wilderness hiking, topped up with sun-downer meditation practice under the changing skyscape, delivered a potent cocktail of personal edges, abysses, insights and inspiration.

In our turn-of-the-century, instant Dennis-gratification, extreme sensation culture, is there an emotional and spiritual price tag for a peak at the personal edge and clear shots of the inner landscape? Can travel photography represent a metaphorical summit in our lives? Is it worth doing the spiritual as well as the creative world? I think so. Inner landscape.

My friend G. Weston DeWalt states the score in *The Climb*:

"Each one of us has the ambition to reach the summit...The price of Everest is now calculated in a different way. More people are willing to pay a cash price for the opportunity, but not a physical price for preparedness; the gradual development of mind and spirit as you climb the lower-level peaks, moving from the simple to the complex and finally to the 8,000ers."

While in the overall scheme of extreme being, a solo retreat along the Chama River was pretty fundamental, my experience of travel photography will never be the same. And perhaps I'll ski the chutes at Taos this winter. No guts, no glory!

For more information about Upaya and its programs, contact: Upaya, 1404 Cerro Gordo, Santa Fe, NM 87501, (505) 986-8518, e-mail: upaya@rt66.com, www.zpo.org/upaya.

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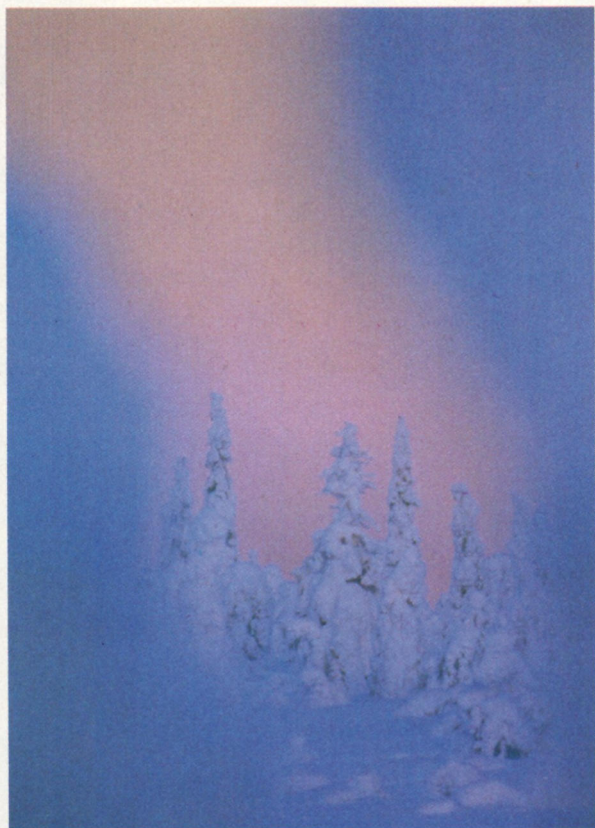
WINTER'S



Birch trees along the riverside, Sweden. Far from a drab gray-brown, this image shows the colorful possibilities of winter. Note how the silvery-white of the tree bark adds contrast to the scene.

Pentax 645, Pentax 200mm, Fujichrome Velvia

PALETTE



It wasn't until Jan Tove Johanssen picked up a camera that he discovered all the beauty that was in his metaphoric backyard (or discovered the visual treasures literally and figuratively outside his own back door). Camera in hand, Jan Tove (the name he goes by) set out to capture the natural beauty of his native Sweden and its neighbors, not only during Scandinavia's pleasant spring, summer and fall, but in the heart of winter as well. Photographically speaking, Tove is truly a man for all seasons.



In his new book, *Speglingar*, Tove shows some breathtaking winter images. Many people think of winter as the season without colors, where the landscape is predominated by brown and gray, but when you take some time, the palette of the winter landscape emerges. Tove hones in on the hues and subtle tones of winter and, as a result, his photographs are rich in colors and tonality. As winter sets in, these pictures give you an idea of what's photographically possible.

Outdoor Photographer: A significant portfolio of your

OPPOSITE, TOP: Winter frost, Finland. By using a pair of out-of-focus, snow-covered branches in the foreground, Tove vignettted this scene. **BOTTOM:** Bullfinches, Sweden. An overcast day can be perfect for photographing winter wildlife because the animals show up so well against the light, neutral background. **THIS PAGE:** Starlings at dusk, Sweden. A rich sunset makes a colorful backdrop to these fleeing starlings.

WINTER FROST: Pentax 645, Pentax 600mm, Fujichrome Velvia;
BULLFINCHES: Pentax 645, Pentax 600mm, Fujichrome Provia;
STARLINGS: Pentax 645, Pentax 200mm, Fujichrome Velvia



ABOVE: Pine forest, Finland.

Instead of photographing the warm glow of the sun lighting the subject, try using that glow as a background.

RIGHT: Shoreline of Lake Asunden, Sweden. *The way the elements of snow, sun and wind play themselves out on a landscape makes winter a dynamic time to shoot.*

ALL IMAGES: Pentax 645, Pentax 35mm, Fujichrome Velvia

work can be found in your book, Speglingar. What does "speglingar" mean?

Jan Tove: "Speglingar" means reflections. The book contains reflections of my mind, both in images and text. There are 32 short stories in the book, stories about nature, but also about man and nature and how we're connected to it. I've tried to translate one of my shortest stories in the book that I used opposite the photograph of one of my bird shots. I hope the meaning comes across even if some of the poetry in the original text will be lost:

"Between earth and heaven there was a cloud. During the night it cracked and the stars came down. The heat from the ground took off. They huddled together in the open field. No one knew anything about their dreams—if they had any? They never asked questions about the stars. The quiet light of the night was just there, and that was enough. The shadows frightened them. The sounds of the night could unmercifully pull them away from the ground and the rest. Flight was a part of their life.

"Security? What do words mean to those who neither can read nor write? But I'm sure that they sometime, somewhere felt the meaning. At dawn they woke up in hunger. The field was turned around in their eyes and the sky was examined. Everything was quiet. Suddenly the world appeared open and bright. Was there a glimpse of happiness in their souls? They brought the answer into the grass and flow-

ers, which locked their rocking gait. They turned their eyes into the field one more time before they felt the meaning of security. To feel is one thing, but otherwise words mean nothing to a partridge."

Outdoor Photographer: *What are you looking for when you go out into the field to photograph?*

Tove: Sometimes I take my camera and just walk around, trying to catch what I see. When I do an assignment for magazines, I always try to learn as much as I can about what I'm going to photograph. The knowledge is very important to get ideas for a picture story. It's very important to mix knowledge with fantasy and creativity. When I go outside to photograph, very often I've already decided what I'm going to photograph.

For a long period of time, I've also tried to focus on very common subjects and attempted to look at them in different ways. The way of seeing is the

most important thing in photography. Take, for example, the pictures of the winter forest from Riisintunturi in Finland. My experience of this forest had something to do with old fairy tales. I felt like a little boy standing there in the cold, looking through the keyhole into a wonderland. This was my fantasy and, with my knowledge, I knew how to take the picture, a picture that gave me a feeling of being beyond reality.

There's so much to say about seeing and transforming nature into images. Light, colors and shapes lead to a composition. Take, for example, colors. There are colors everywhere. But as a photographer, you have to combine them. I give a lot of attention to colors. I'm trying to find colors that are harmonious or disharmonious, depending on the motif. But I'm not that fond of just blue skies and bright colors. I like soft colors, just as I like composing with softer lines. Very often compositions are too obvious; I mean there's a vertical line that leads to a circle, etc. A composition can be very quiet. Colors can be very quiet. The whole picture can be very quiet. And that's what makes the picture strong. You just need to give the picture time to reach you.

Outdoor Photographer: How do you work in winter conditions?

Tove: I've never viewed winter conditions as a problem. I've been out photographing when the temperature has been minus-30 to minus-35 C. When I use the Pentax 645, I have an extra battery pack in my pocket. It's very easy and fast to switch batteries. As long as the camera is cold, it's no problem. The problems appear when you're going inside into a warm room. You can take a warm camera into the cold, but not vice versa.

In winter photography, it's good to have two camera bodies—one that you keep warm inside your pocket or jacket and one that you work with. When I change camera bodies, I wrap the cold camera in a sweater and then put it inside my jacket to avoid big changes in temperature. I do the same with my film. I carry it in pockets near my body. Cold film could crack, especially when using motordriven cameras. In winter, I also prefer using a wooden tripod. It works better, and it's not so cold to touch.

Fog on the eyepiece can also drive you crazy in the winter. I know that there are some preparations to deal with this, but I haven't tested any of these products. I just use my polishing rag or a piece of chamois. I try to keep all my lenses free from snow but, if I get snow on a cold lens, I just brush it away. I never use my breath to try and blow it away.

Outdoor Photographer: How do you physically deal with working in the cold?

Tove: When I'm outside shooting, I use gloves where my fingers are free to handle the buttons. My experience is that my cameras work better than I do if I'm not well-prepared for the cold. It's important to have warm boots, a warm jacket and a warm cap. It's also important to carry something to eat. A hungry photographer can easily freeze and mentally doesn't function as well.

Outdoor Photographer: What about camera equipment?

Tove: In 35mm, I have a Canon EOS-1N and 24mm *f*/2.8, 50mm macro, 70-200mm *f*/2.8, 90mm tilt and shift, 300mm *f*/2.8 lenses and 1.4X and 2X converters. In medium-format, I have a Pentax 645 with 35mm *f*/3.5, 45mm *f*/2.8, 55mm *f*/2.8, 75mm *f*/2.8, 120mm macro *f*/4, 200mm *f*/4, 600mm *f*/5.6 lenses and 1.4X and 2X converters. Also in medium-format, I have a Mamiya 7 with a 65mm lens.

In large-format, I have a Linhof Technikardan 6x9, 6x7 and Wista 45 VX 4x5 with Schneider 47mm, 58mm, 75mm, 90mm, 120mm, 210mm, 360mm and 500mm lenses.

I have a lot of cameras and lenses, but I'm not a collector. On the contrary, I have what I need for all the different types of work that I do. Cameras and lenses are to me what the tools are to a carpenter.

Outdoor Photographer: What dictates your use of a particular format?

Tove: It's quite easy. If I'm going to photograph birds, mammals or other animals, I choose the 35mm equipment. But there are moments when I also use the bigger format for this purpose—in a hide, for instance.

The Pentax 645 is a perfect all-around camera. I use it a lot for stock photography and reportage. When doing reportage together with a journalist, I often use 35mm and the Mamiya 7.

I use my large-format cameras for landscapes—the 4x5 mostly when I photograph close to my home and when traveling by car in Scandinavia. When I'm going abroad by airplane, I bring my 6x9 Technikardan. Very often, I limit the equipment to just two lenses, one 6x7 magazine and the Technikardan body or the Wista VX, not just to be able to walk a longer distances, but also to push myself just to use two lenses and see what's coming out of that. Too much and too heavy equipment can kill all your inspiration and creativity.

Outdoor Photographer: Is there interest in photography in Scandinavia?

Tove: There's a lot of interest. Every second year there's a great festival with photographers from the whole of Scandinavia in a place called Vargarda, just 80 km east of Gothenburg. Some photographers from the States have been there as well—Art Wolfe, Frans Lanting, and next year Robert Glenn Ketchum will attend.

OP



By Steven Werner
Photography By
Michael "Nick" Nichols

Even for a tigress with cubs, Sita was extremely on edge and overprotective. She was aware that something was deeply wrong with the litter and, consequently, the lives of her offspring were in constant jeopardy. She had mated with both her son and Charger, a dominant male in her territory, so there was no telling which was the father.

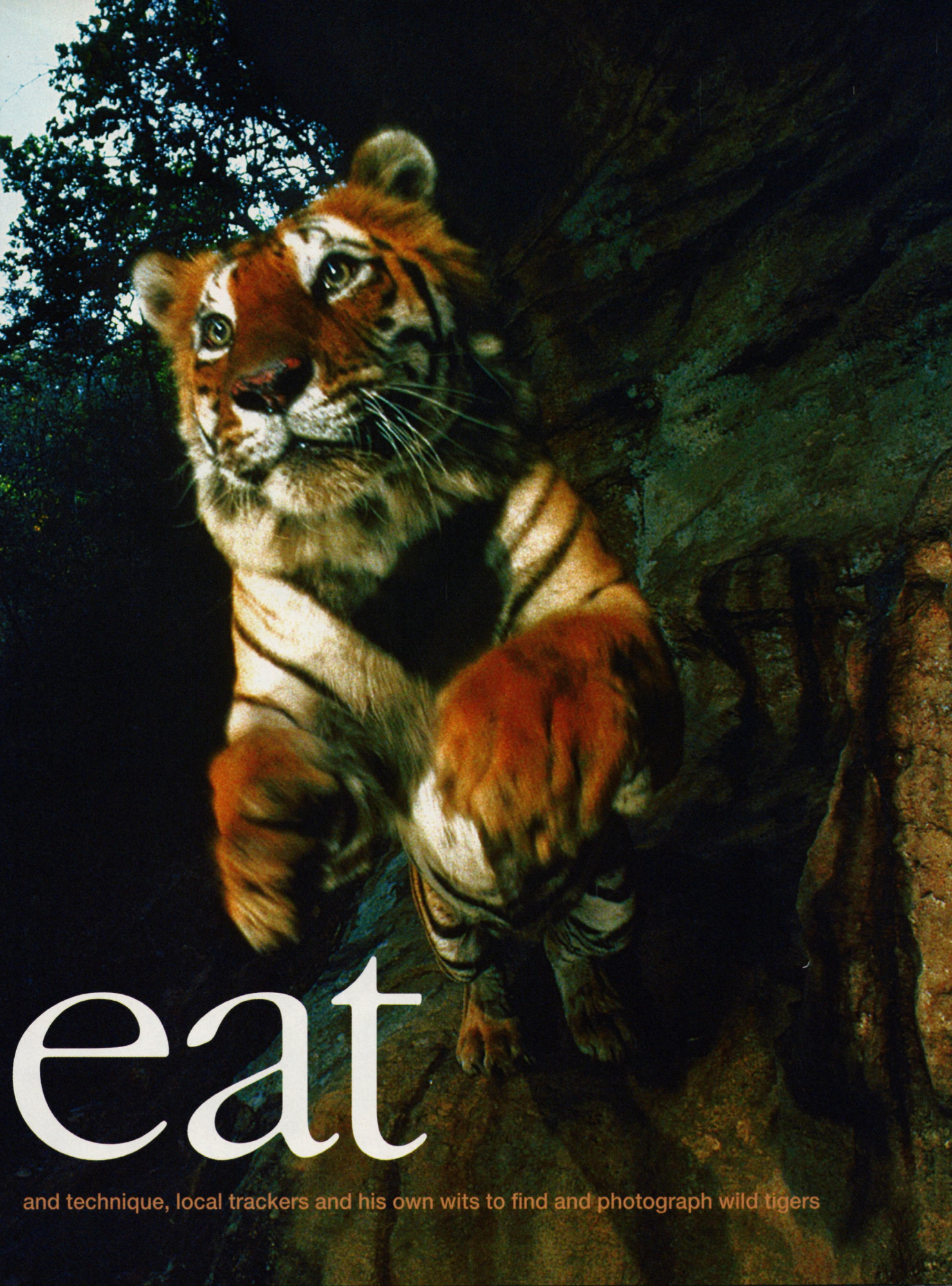
Reacting to instincts beyond human comprehension, it was as though she knew, that Charger knew, that the cubs might constitute a genetic violation of nature that needed to be destroyed. Realization of this came to Michael "Nick" Nichols later as hindsight.

Sensitive to her heightened state of uneasiness, Nichols and his guides chose to set up their blind well distant from the den where the cubs were kept, using binoculars and strong telephoto lenses. Still, Sita perceived them as a threat and stalked the men on two occasions. The first time, she charged unannounced out of nearby bushes. "You're not supposed to run, but that's all fantasy," says Nichols. "You run anyway. The two elephant mahouts, with years of experience in tiger country, virtually trampled me in their escape. I fell and got back up and she charged again.



tigerb

Natural history-specialist Nick Nichols combines all the advantages of available technology

A full-page photograph of a tiger standing on a large, dark, textured rock. The tiger is looking towards the left of the frame with a focused expression. Its orange fur with black stripes is clearly visible. The background is dark and out of focus, showing the silhouettes of trees and foliage. The lighting is dramatic, highlighting the tiger's face and body against the dark background.

eat

and technique, local trackers and his own wits to find and photograph wild tigers





PREVIOUS PAGES: The male Indian tiger, Charger, named for his aggressive behavior, triggers his own self-portrait by jumping through a TrailMaster infrared beam device. With the subject only three feet from the wide-angle lens, this revolutionary image provides a particularly rare view of a wild tiger. ABOVE LEFT: Concealed in a hide at extreme dusk, Nichols used only enough flash light to illuminate the tiger's eyes. "When I made this shot, he's already so close that I couldn't change lenses because I was paralyzed by fear," said Nichols. ABOVE RIGHT: Indian people live in close proximity to tigers; here, telling pug marks are illuminated by a bit of flash light. "They lose a lot of dogs, but one of the fallacies is that tigers regularly eat humans." BOTTOM ROW: The menagerie of visitors to a water hole is captured by Nichols' camera trap: Charger takes a drink; mischievous langur monkeys linger long enough to expend all the camera's film; a leopard appears anxious. Modern automation makes it possible to record uncommon moments of candid behavior.





RIGHT: The Bengal tigress, Sita, gives her cubs an early-morning bath. The ritual helps cement the maternal bond so crucial in the first year of life. She has bolstered the local population with six litters in 16 years. "A den is just a tiny little hole that only the cubs can enter," explains Nichols. "She makes a chuffing noise that calls them out, and a high-pitched sound means go in. Once she has made that noise, you couldn't have driven them out with a barge pole. We'd think, 'Oh, she's gone, maybe they'll come out.' Never!" **ABOVE:** "In this picture, my favorite, she's going to move them to a new site. I just happened to have my elephant in a spot where I could see into the cave. I was so excited and shaking with adrenaline that even as an experienced pro I couldn't hold the 300mm f/2.8 with 1.4X teleconverter steady."

ALL MANUAL PHOTOS: Canon EOS-1N and EF lenses including 300mm f/2.8L, 300mm f/4L IS, 70-200mm f/2.8L, some with 1.4X and 2X extenders, Canon Speedlite 540 EZ, Kodak Ektachrome E100SW

ALL REMOTE PHOTOS: Nikon N90, Nikkor lenses from 20mm to 35mm, SB-28 Speedlites, Kodak Kodachrome 64



It's just the most horrible thing you could ever imagine—a tiger charge in your face. I went into shock and never wanted to see another tiger."

After about an hour, Nichols regained his composure and they moved their position so that a broad gorge separated them from the den. At this distance, the animals were tiny, even when seen through a 1200mm lens. Further, Nichols adopted the philosophy that he'd keep himself visible so that the

tigress wouldn't perceive him as a threat. Still, Sita didn't see it his way.

"For no apparent reason, my guide said, 'Nick, let's go,'" relates Nichols. "His shoulders were tense and his body language had changed completely." Nichols was reluctant to leave, having waited all day with no pictures. "We retreated to a place where we felt safe, and my guide threw a stone to where we had been sitting. Whoa! She was there, ready to pounce

on us!" She had crawled across the 100-yard ravine with such stealth that no creatures in the vicinity issued an alarm call.

Ultimately, it's suspected that Charger killed those cubs and fathered a new litter. When Nichols returned in another season, Sita was more relaxed and became the subject of his best efforts to document the rearing of cubs.

We caught up with Nichols to reminisce about his National Geographic



assignment in India while he was on safari in East Africa. The thought of Nick Nichols leading a group of eager photographers around the Masai Mara was amusing. Of course, we both knew that his "students" were going to pump him, day and night, for all his filter, film and exposure factoring secrets that they assumed were part and parcel to his success as a National Geographic photographer.

But the true irony was Nichols' real

secret: his above-average patience and determination once he has set his mind on a photographic goal. Certainly, his position at the Geographic affords him the luxury of time and, by some comparisons, a lavish budget. And, yes, the Nick we know is more apt than most photographers to admit to the simple factors of failure and luck. However, beneath his easy, disarming Alabama manner, Nichols is an intense photo perfectionist.

A case in point would be his tiger project, which we discussed at great length while seated in front of his tent in the Masai Mara. (It was hard to believe he was back on the continent again, only weeks after returning from a more recent venture into the physically taxing jungles of Ndoki in Central Africa.) As one of his longest and most in-depth projects, his coverage ranged from an intimate focus on the tigress Sita and her litter of cubs to the



Nick's Great Adventure

Crouching to imitate a big cat, Nichols (left) tests a remotely operated 35mm camera and strobes. The key piece of equipment is a TrailMaster, which triggers the camera when an animal interrupts its infrared pulse beam. The product was originally popular with hunters who used it to monitor the movements of deer along forest trails. Scientists also use it to count the passage of animals for figuring local population densities. To find out more about the TrailMaster, contact (800) 544-5415, www.trailmaster.com.

*A trademark of Nichols' bodies of work is his inclusion of ancillary cultural connections between man and beast. **TOP TO BOTTOM:** At Mangalore in Madras State, the grandeur of the tiger is simulated by painted dancers escorting an effigy of the goddess Durga from her temple. In Los Angeles, a U.S. Fish and Wildlife Service room houses confiscated items from endangered species. A tiger skin cost a California man six months in prison. A period portrait of hunters with their guides and beaters pose with their kill. The Rajah of Sugarda alone killed 2000 tigers. Today, 2500 to 3750 Indian tigers remain.*

broad environmental and cultural topics involving tigers and man around the world.

Outdoor Photographer: *It seems like forever since your first trip to India to photograph tigers for the December 1997 National Geographic. What was the genesis of this major endeavor, and how long did it take to finish?*

Michael "Nick" Nichols: This project started when I learned that the *Geographic* was considering publication of a tiger story using stock photography. I was concerned that some photos were incorrectly labeled as photos of wild tigers, when I knew them to be of captive animals. Other photographs were of tigers that were long since deceased and, therefore,

too old to use in a current feature.

But the ultimate stimulus for me was when *Time* magazine did a cover story with a [Jim] Brandenburg picture of a Minnesota zoo tiger and ran the word "doomed" in a big headline. My visceral reaction was, "No way! How can we let the world think one of our most magnificent creatures is about to disappear? We [the *Geographic*] should look into the matter and do an extensive article."

I asked the editor to let me go to India for five weeks to try to find a place to photograph wild tigers. The real concern was the possibility of spending excessive time and money chasing a needle in a haystack. I want to underline to your readers that an Indian tiger has a 25-square-mile territory. In Siberia, it's 1000 square miles. In all that space, you're looking for one animal that's severely camouflaged.

Subsequently, I got the go-ahead to travel to India in November and

December of '95. I finished photographing in June of '97 after four trips to India and a fifth that I made on my vacation. Additionally, I traveled to Siberia to include the environmental issues surrounding the Siberian tiger and to Thailand and around the United States to include material on captive-tiger issues.

Outdoor Photographer: *That takes in a lot of territory. How did you get yourself pointed in the right direction from the start?*

Nichols: On the first five-week scouting trip, I met the preeminent tiger scientist, Ullas Karranth (with the Wildlife Conservation Society), and he said, "Look, if you want to photograph wild tigers, there's only three places to do it: Bandhavgarh, Kanha and Corbett, in that order. Ranthambhore, the famous tiger park, had just experienced a decimating bout of poaching. Nagarhole National Park, where Karranth works, is full of tigers but, because the vegetation is so thick, you can't see them. I needed to focus my efforts on the part of India that's a deciduous forest, where it's more open in the dry season and I'd have a chance to see the animals. On the same note, all three of the recommended parks have tourism, and the visitors have gotten individual tigers habituated to Jeeps or, in the case of Bandhavgarh and Kanha, domesticated elephants with humans on their backs.

Outdoor Photographer: *So all that happened between 1995 and 1997?*

Nichols: It took two years to pull it off. My basic plan for the natural history story was to follow the cycle of a tigress and her cubs. On the first five-week trip, I didn't have permission to do anything but be a tourist in the national parks. I couldn't use camera traps, I couldn't use hides, I couldn't get out of the Jeep. Only if I chanced upon a tiger walking across a road, do I get a shot. They said I was the luckiest person, too; I had 16 tiger sightings in nine days.

But out of 16 sightings, the only one that would ultimately be publishable was a 1000mm shot of a tiger in the grass. I realized that there was no way I could do a *Geographic* article if I didn't have some special access. I took those measly frames back to the *Geographic* and said, "Look, I need 'X' amount of dollars and seven months in the field." I was convinced

that I could complete the story in that amount of time because the habitat is dry and the water is very localized, perfect for using camera traps at water holes. Even if a tiger is spending its days in deep cover, it has to drink.

Outdoor Photographer: *What was an average day like?*

Nichols: My success ratio over the whole project was about one tiger in six days—and that doesn't mean all the photographs were usable! If you add it up, maybe once a month I got an exciting picture. Most of the time, when I did find them during the day, they were sleeping. Tigers aren't noc-

that everybody's afraid of him. But Roy Toft, my assistant, would walk up to check a water hole, clapping his hands so that any tiger would hear him and run away. On two occasions, Roy walked right up to Charger while he was sleeping. That wasn't good because if you surprise him and he's cornered, he'll attack. (*laughing*) Roy was proficient at climbing trees very fast, so it worked out.

India is the undiscovered Africa. The wildlife is unbelievable. The parks are small but they've got incredible bird populations, rhinos, elephants, tigers.... The park where I photographed

up in a tree, we'd look at its eyes with binoculars. Wherever he was looking, that's where the tiger would be.

Outdoor Photographer: *To clarify what you said earlier about the vast range of tigers, if there's one tiger, will there be more than one tigress in the territory?*

Nichols: The male tiger's territory is controlled by the amount of prey. In the 25 square miles of a tiger's range, there might be three females, but their territories don't overlap, either. The interesting thing about Charger is that he's controlled his territory for six years and he's never been known to kill any prey animals in that time. Instead, he patrols and steals from females and the leopards. He'll walk by a group of deer and they won't even make an alarm call. They're thinking, "Oh, that's the lazy bastard. We're safe." But when it comes to defending his territory, he's ferocious.

Outdoor Photographer: *Presumably, while you were off on your not-always-so-fruitful tiger stalking adventures, you could rely on remote camera setups to get the job done.*

Nichols: The cool thing was having these camera traps working on their own while I was photographing from hides and the backs of elephants. The remote shots were particularly exciting because they captured the tiger on its own terms, not reacting to the intrusions of people. Yet, still I consider the pictures to be my photographs because I framed them the way I wanted them and I set up the lighting.

Normally, camera trap pictures make use of just one flash and the result looks unnatural. We used multiple Nikon Speedlites, all set up so that they'd expose properly no matter what time of day or night. We had finally found solutions to our problems from the Congo [referring to his "Ndoki" feature in the July 1995 *Geographic* and May 1997 *Outdoor Photographer*]. In the Congo, we were using 510-volt batteries. In India, all of the sophisticated electronic gear ran on simple lithium AA batteries, and we could leave the setups out for a month because the Speedlites were set to go to sleep when not in use. We had to go into the Speedlites and change the circuitry so that the strobes would wake up and fire without the usual delay when an animal walked



Amid a herd of chital (or axis deer), an Indian peacock performs a fan-feathered mating dance. The photo reminds us that there's a place where these spectacular birds are wild.

turnal naturally. They became nocturnal when man got too close to them. It's unbelievable to me that India is the last stronghold of the tiger. My son went with me on a vacation and was blown away by the mass of humanity in India. Yet, the tiger is so much a part of their culture and mythology that they're determined to protect it.

In most of India, the only instances of man-eating comes from injured tigers that can't kill wild animals properly. Otherwise, you can walk right by a tiger that isn't injured and has never eaten a human.

Charger, a male in one park, is so aggressive around Jeeps and elephants

Sita also had leopards, wolves, wild dogs, jackals and sloth bear, to name the predators.

OP: *And they're all relatively easy to view?*

Nichols: No, in general they all require patience, but photographing tigers is really like hunting with a camera. We hear reference to that in East Africa, but there you're not really stalking, you're driving and looking. In India, you really have to use hunting skills to find tigers on a regular basis. You stake out water holes and track, but you're carrying a big lens instead of a gun.

In the forest, every creature has a call for the tiger. At dawn, we'd go out on elephant looking for tiger tracks and listening for alarm calls. And, as soon as we'd hear an alarm call that said "tiger," we'd head in that direction. If the call was made by a langur monkey

TIGER BEAT

through a camera trap.

Outdoor Photographer: We know you to normally be a Canon user.

Nichols: The whole camera trap system was Nikon; everything else was photographed with Canon. Nikon Speedlites just turned out to be easier for our technicians to modify. The new Canon EOS 3 and its accompanying strobes take care of this.

OP: When you photographed Sita and her cubs at the den site, what length lens did you have to use?

Nichols: Most of the photos were with a 300mm *f*/2.8 with a 1.4X and a Canon 540 on-camera flash. That's what it took to get tight shots. My "tripod" had four legs and ate everything in sight. After we had been at the den site for a week, behind us looked like Armageddon. The elephants eat continuously and keep shifting their feet.

When I returned to India that October, the park—instead of being a desert—was lush and green after the monsoon. There was water everywhere, so you couldn't pinpoint the tigers. I was thinking, "I'm never going to find anything." But on just the second day, we found Sita laying at the opening of two caves (the opening shot in the *Geographic* article). That den site is where I did all the photography of the mother and cubs. Over the next 10 days, I photographed month-and-a-half old cubs right next to the den. Just for clarity, a tigress doesn't go into a den. A den is just a tiny little hole that only the cubs can fit into. That way, other predators can't get in. The tigress lies on the outside as a sentinel and, whenever she wants to give them milk, she calls the cubs out.

Outdoor Photographer: Are there any tricks of the trade to get sharp photos under such conditions?

Nichols: Really, the flash was what made the pictures sharp. I mixed the flash with the daylight at the highest possible shutter speed. I pushed Kodachrome 200 because I didn't want to lose quality by going to something like [ISO] 1000 film. But mostly my real "secret" was shooting massive amounts of film. You count on that one moment in time when all the motion—subject, lens, shutter and elephant breathing—comes together. If you shoot enough film, you can actually push the limits of photography. It's way off the subject, but with the gorilla photography I did in the Ndoki, I did just that. Often, I was shooting at slow shutter speeds with a 1200mm. I trained the lens on a spot, locked up the mirror and then watched the gorillas through binoculars with a shutter cord in my hand. When something looked photo-worthy, I fired.

Outdoor Photographer: Did you use a Canon IS lens in India?

Nichols: Yeah. At first, I had the 75-300mm IS that Canon first introduced. While I was on assignment, they introduced the 300mm *f*/4 version. In fact, it was the one that your magazine lent to me when I went to Siberia. That lens was a breakthrough because it's an L lens with a respectable maximum aperture.

Apart from equipment, the other thing that's really important when you're continually shooting from the

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back of an elephant is camera angle. I'd always try to get the elephants down into a gully or a depression or hope to find the tiger on a rock, so that I could achieve a more eye-to-eye camera angle.

Outdoor Photographer: *If you know that game will frequent the few available water holes, setting up a blind around these gathering points must have been productive.*

Nichols: Blinds were productive, but not necessarily for tigers, and they weren't comfortable. At extreme dusk, I used flash only to illuminate the eyes. Usually, the animals were so far away that the flash light couldn't light much else. One time, a tiger approached the blind. He got too close for the lens I was using, but I was too afraid to change it. He came right over and peered into the hide and roared at me. (*laughing*) I ended up in the fetal position in the back corner.

Basically, I spent 16 days in the hide in 120 degrees and got five minutes of tiger time; about four of those minutes were after dark when I couldn't see anything. One time, I used two

rolls to photograph a tree that I thought was a tiger.

The cool thing about that hide was all the monkeys, birds, deer and other animals that would come to drink. I shot 1800 rolls of film on this assignment, and I'd bet that no more than 400 were of tigers. My editor finally sent me a fax in India—rather sarcastic—that said, "Nick, no more monkeys or deer unless they're in a tiger's mouth!" I was really offended by that. I had been trying to keep my sanity by photographing the monkeys and deer because they were so fascinating. When I tell people 1800 rolls of film, they think, "Whoa, you must have a lot of pictures of tigers." That's what it took to get literally a handful of good tiger pictures.

Outdoor Photographer: *When photographing animals, it's almost impossible to be frugal with film. You take one shot and then they do something else interesting. It's endless.*

Nichols: The camera traps weren't frugal with film, either. I had seven cameras at seven different sites. We'd check them once a week. The funny

thing about the camera traps is that the monkeys would use up a whole roll. I can't tell you how many times that happened. We'd set the camera up at 4:00 [p.m.] and then come back seven days later. The TrailMaster [triggering device] database would tell us that at 5:00 [p.m.] on the first day, there were 1000 triggers, meaning that the monkeys had come for a drink just after we left.

And this is the real sad part: We'd put down sand right where we'd expect an animal to put its foot when it drank. On this one occasion, after the monkeys had done their mischief, there was this big tiger track in the sand, but no film to capture the tiger. After awhile, we learned to set the TrailMaster for tiger time. Usually, tigers drink early in the morning, late in the day or during the night. The monkeys avoid the water holes at those times.

Outdoor Photographer: *One special feature of the photos taken with camera traps is the ability to get close with a wide-angle lens.*

Nichols: Sometimes a 24mm six
(*Cont'd on page 99*)

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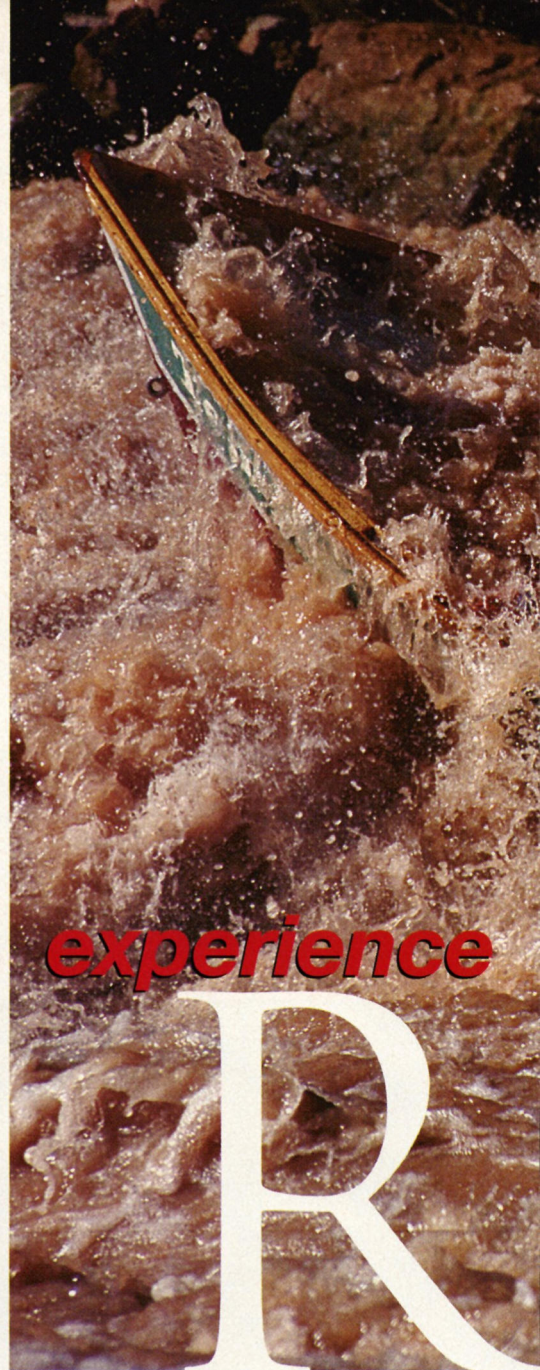
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Step into Kathleen Jo Ryan's
pictures and take a ride
through the Grand Canyon

By Christopher Robinson

Photography By Kathleen Jo Ryan

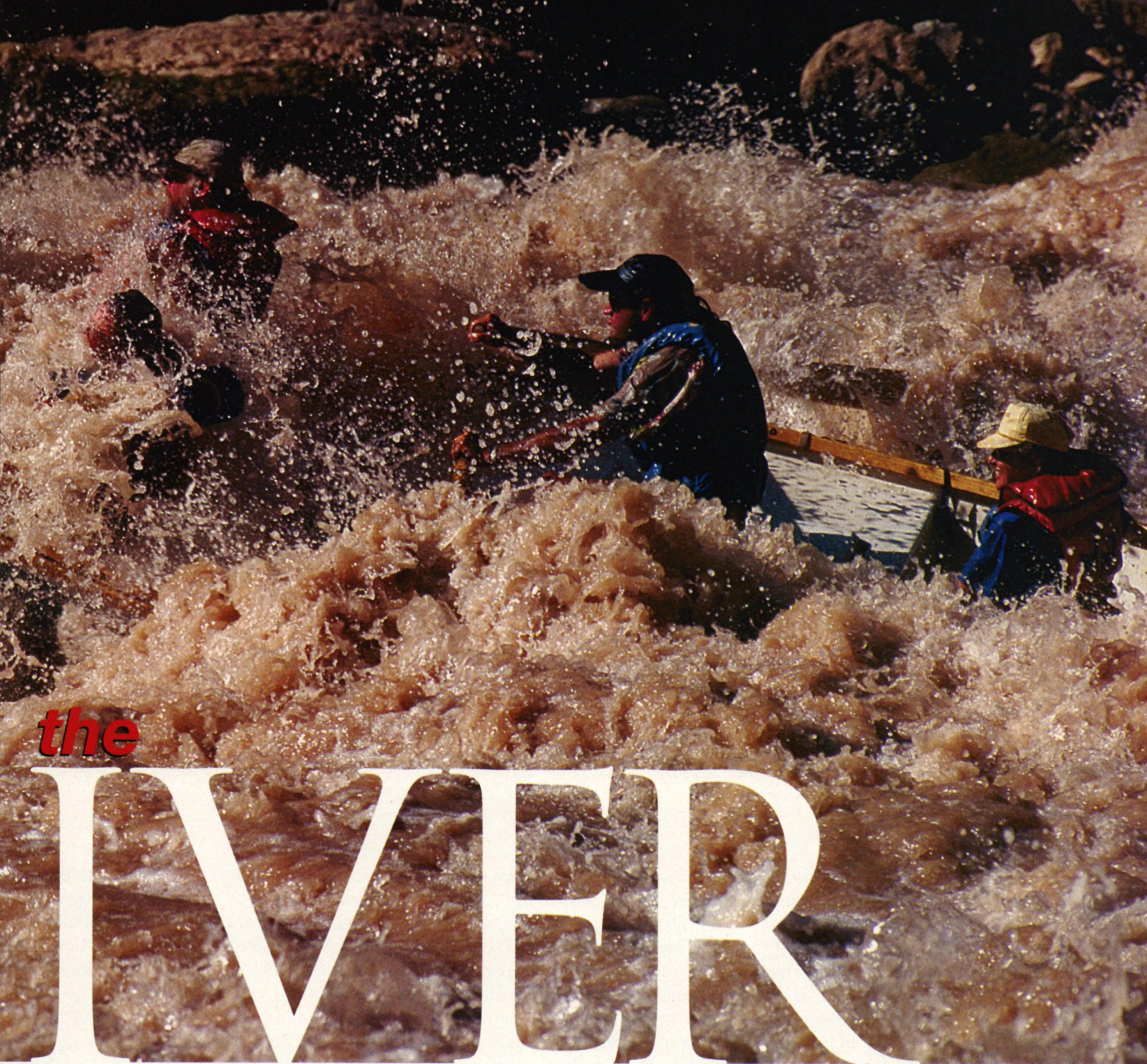


experience

R

The Grand Canyon is one of America's great treasures. Photographing in this pristine environment is wrought with difficulties and hazards. CLOCKWISE FROM TOP LEFT: The white water of a rushing river makes a texture that isn't found anywhere else; When the canyon narrows, the clear river becomes a brown torrent of water and mud; The steep walls of the Grand Canyon descend right down into the river; The solitude of the canyon can be overwhelming at times.





the

RIVER



IN HER BOOK, *WRITING DOWN THE RIVER: INTO THE HEART OF THE GRAND CANYON* (NORTHLAND PUBLISHING, 1998), KATHLEEN JO RYAN'S SKILL MET WITH OPPORTUNITY AROUND EVERY BEND AND TWIST IN THE GRAND CANYON. The book is full of stunning images that bring the viewer right down into the rushing water. Ryan is a largely self-taught photographer who has completed several book projects with her impressive imagery. A self-described non-technical photographer, she modestly explains that any technical wonder she's able to pull off in a photograph is largely luck. Of course, it has been said that luck is the result of skill meeting opportunity.

When asked about what she was trying to do in the book, Ryan says, "I wanted to make a book about the experience of running the river—not just a collection of pretty pictures of the scenery." That quest to recreate the experience is at the core of what Ryan tries to do with photography. In terms of this book, that means bringing the reader into 250 miles of carved rock and furious rushing water from



which the only escape is to push through to the end. Once you embark on a river trip through the Grand Canyon, you're committed.

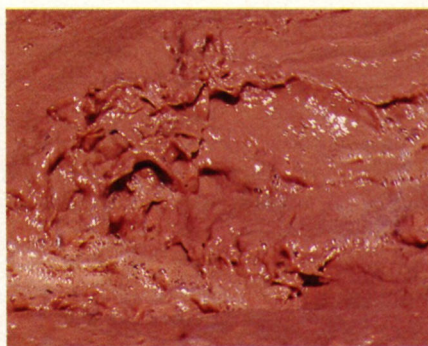
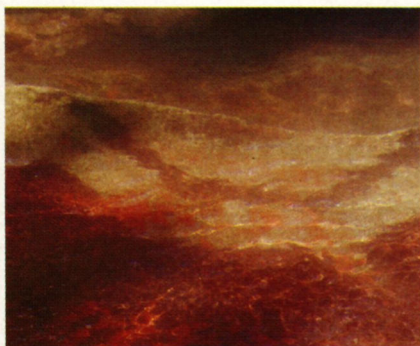
The photographs that illustrate the book are very much concentrated on the moment. Ryan is a spontaneous photographer; because of that, she's drawn to capture the spontaneous moments that people see. "I find that people tell me that I photograph what they see." Her pictures draw you in

and encourage you to feel what that instant in time was like.

How do you get that instant? It's what Henri Cartier-Bresson called "the decisive moment," and it's a rare image that really captures. For Ryan, it comes from being intimately familiar with your equipment and then always being at the ready to catch the moment. While she feels she doesn't have the deep technical knowledge of someone like Galen Rowell, she has taken the time

to become intimately familiar with the gear she uses. "I have Nikon cameras and lenses that hold up very well for me. My collection has grown one lens at a time. I get to completely know each piece of equipment I carry so that I don't have to think about it. That's when I can concentrate on getting the moment."

Being ready to catch the moment means that Ryan is concentrating entirely on what's happening now. "I take what-





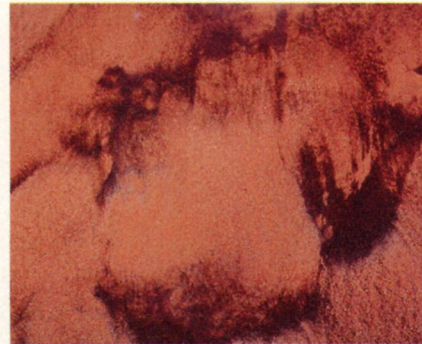
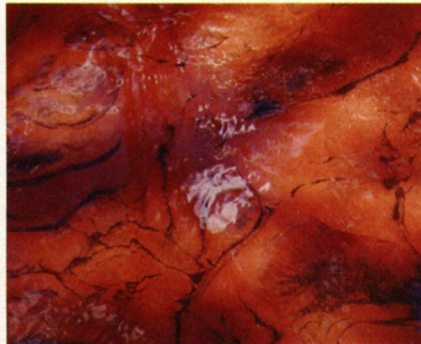
ever is there at any given moment. I don't sit around waiting for something that I might hope will happen. I really go with what's given to me." When it comes to getting action photographs like the ones in *Writing Down The River*, that's the way you have to be working. Fast-moving action can change radically in an instant. If you can't react just as fast, you'll miss it. Likewise, you can plan for a shot and get yourself all set up to take the picture, but

if the action doesn't follow your preconceived notion, you get nothing.

Ryan attended a Nikon School seminar in the 1970s. That's pretty much the extent of her formal photographic training. At that class, she was taught that the conventional wisdom of $\frac{1}{25}$ sec. as the minimum hand-holding shutter speed was in fact too slow for most people. When she switched to $\frac{1}{250}$ sec., there was an immediate improvement in the look of her images. She now

considers this her absolute minimum shutter speed. The kind of action photographs that she likes to take almost always precludes the use of a tripod. It's all just happening too fast, and Ryan feels like she's going to miss her shot fumbling with a tripod. A fast shutter speed is mandatory.

With fast shutter speeds in mind, Ryan uses fast lenses. Coupled to her Nikon N70 and N90 are a Nikkor 35-70mm $f/2.8$ and a Nikkor 80-200mm





PREVIOUS PAGE, TOP LEFT: Ryan catches action like this by always being ready for it. She takes what she's given at any particular moment. **TOP RIGHT:** When you shoot from a boat, a high shutter speed is critical for this kind of sharp image. **BOTTOM:** These five "portraits" of the river show some of the various faces and textures that make up the Grand Canyon. **ABOVE:** For sheer adrenaline, nothing beats a day of whitewater.

ALL IMAGES: Nikon N90 and N70, Nikkor 28mm, 35-70mm and 80-200mm, Kodak Ektachrome E100S

f/2.8. She often finds herself working at the widest aperture settings, which doesn't give her a whole lot of depth of field. "I find that the sharpness of the action makes up for the lack of depth of field," says Ryan. And the action is tack-sharp.

To bring *Writing Down The River* to fruition, Ryan made a total of seven trips through the Grand Canyon. Each trip gave her a different perspective on the river and the dynamics of the canyon. Photographing prolifically on each trip had many special challenges when it came to keeping her film and equipment safe.

On one trip, Ryan's boat capsized, submerging the dry bag charged with protecting all of her film. In a rushing river, getting control of a swamped, capsized boat is no trivial task—it took hours. There was a scary moment when she opened the film dry bag and examined its contents. Miraculously, everything was alright.

In addition to the risk of capsizing

and losing everything, there were the more mundane challenges of working in a wet environment with mud, intense heat and fine, silt-like sand everywhere. None of these elements are especially kind to photo gear and film. The sand in the riverbed was especially problematic—it gets into everything. Vigilance as well as ample dry bags and waterproof cases were the keys to success.

Ryan's stunning images in *Writing Down The River* not only capture the essence of the experience, but they also invite you to step into that moment and see something. It doesn't even have to be what Ryan saw. "I'm thrilled when someone tells me that my picture takes them back to an experience they saw. To me, it's the truth of the image."OP

To obtain a copy of Kathleen Jo Ryan's book, *Writing Down The River: Into The Heart Of The Grand Canyon* (Northland Publishing, 1998), contact (800) 346-3257.

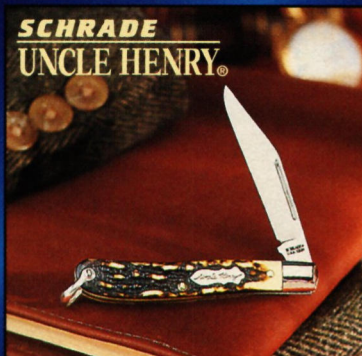
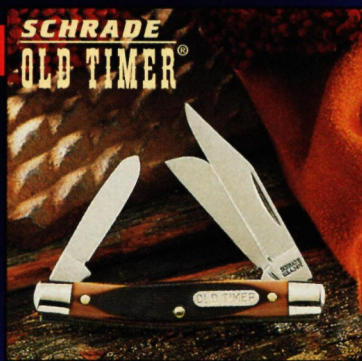


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On a river trip, keeping your gear protected is incredibly challenging. The Colorado River, through the Grand Canyon, has just about every known camera-damaging element. There's water, mud and very fine sand that gets into absolutely everything. When you throw in the chance that your boat can flip and your gear can end up floating through rapids and jagged rocks, you can easily imagine why a protective case can be your best friend.

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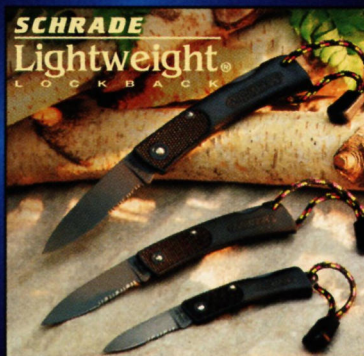
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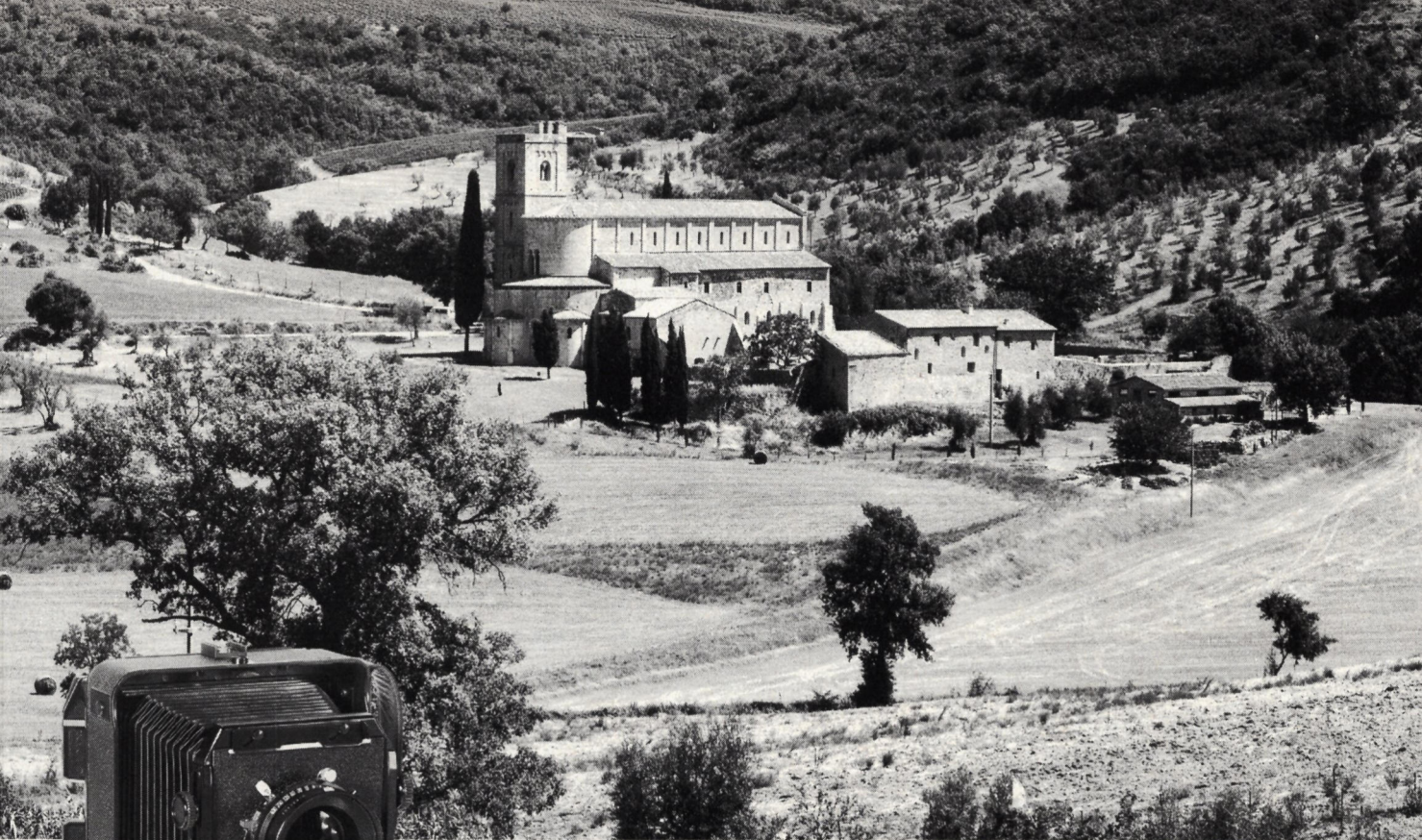


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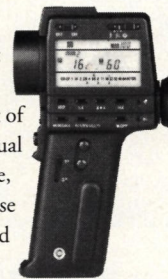
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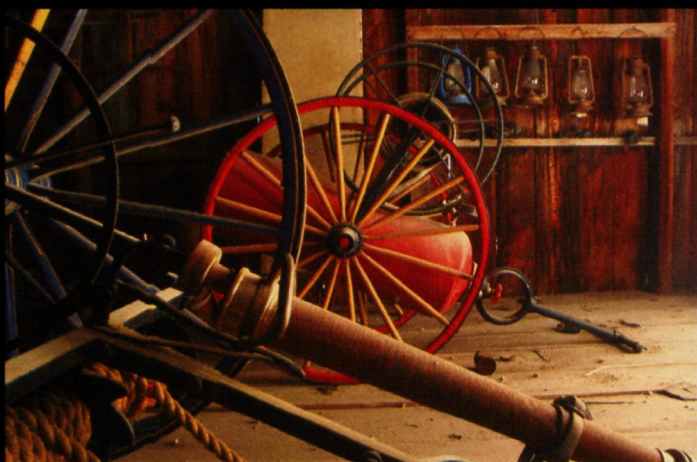
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*Text And Photography
By Graeme Fordyce*

Shooting In A Ghost Town



CLOCKWISE FROM FAR RIGHT: The Minolta XTsi's accurate meter and fine optics render excellent colors and sharp detail; An Escher-like staircase leads into the rafters of a mill; A thick layer of dust covers old bottles; The Bodie firehouse is full of compositional possibilities.

ALL IMAGES: Minolta XTsi and Maxxum lenses, B+W circular polarizer (interiors also with Kodak Wratten 81B), Manfrotto tripod, Giotto ballheads, Kodak E100SW



The air was thin, and the weather was constantly shifting. Exertion is an ordeal at 8750 feet, so a camera pack laden with equipment wasn't too appealing. And the capricious summer climate in the ghost town of Bodie (technically high-desert country) in the eastern Sierra Nevada wavered between crisp and balmy, brilliantly sunny and overcast, with intermittent thunder showers. These were the conditions I faced during a recent first-rate photographic workshop run by Tom Morse of Global Preservation Projects. I needed a camera that would excel in heat and cold, dust and rain, and one that wouldn't



burden me too much while running from ominous black clouds with a tri-legged lightning rod in my arms!

Minolta's new Maxxum XTsi turned out to be an excellent choice for shooting in these variable conditions. The XTsi is very lightweight and compact, small enough to carry with two lenses in a modestly sized hip pack. For a camera that fits in the palm of your hand and puts hardly any strain on your shoulder strap, the XTsi has loads of functions and sophisticated electronics packed inside. On the outside, a metal finish gives you a more traditional camera look and feel, and a metal A-type bayonet mount increases durability for lens changes.

I shot with the full range of the XTsi's modes, from full manual to programmed AE. I found I could rely implicitly on the 14-segment honeycomb-pattern metering system, which evaluates brightness points across the scene to determine precise exposure. I bracketed some exposures (the XTsi allows automatic bracketing, ± 3 EV in 0.5 EV stop increments) and found that the exposure the XTsi suggested was almost always dead-on. The accurate meter was very valuable in Bodie, where the light swings hugely depending on the time of day and the rapidly changing weather.

Another feature that came in handy



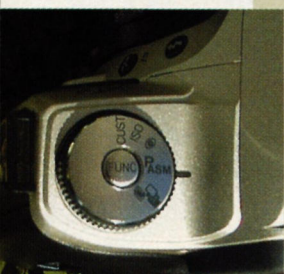


Minolta XTsi Specifications

Camera Type: 35mm Single Lens Reflex
Lens Mount: Minolta A-type bayonet; metal mount
Focusing: AF/MF, wide focus/spot focus area
Autofocus Type: Minolta's TTL phase-detection system with three-point CCD sensors
Exposure Metering: 14-segment honeycomb-pattern with spot metering available (5.5mm diameter)
Exposure Modes: Programmed AE, aperture-priority AE, shutter-speed priority, manual with metering index.
Exposure Compensation: ± 3 EV in 0.5 stop increments
Shutter Speeds: Electronically controlled, 30 to $\frac{1}{4000}$ sec., plus Bulb
Film Speed: Automatic setting for DX-coded films ISO 25 to 5000; manual setting from ISO 6 to 6400
Viewfinder: Roof mirror with built-in LCD panel; 90% field of view of film frame
Depth-Of-Field Preview: None
Film Transport: Automatic single-frame advance, continuous up to approx. two fps, multiple exposures
Built-In Flash: Auto, manual on/off, red-eye reduction; coverage to 28mm, GN of 39 (in feet, ISO 100), recycling time of three sec.
Flash Sync: $\frac{1}{25}$ sec.
Self-Timer: Electronic with 10-sec. delay
Power Source: Two 3-volt CR2 lithium batteries
Dimensions: 5.3x3.5x2.4-inches
Weight: 13.6 ounces
List Price: \$598 (body); \$880 (kit with 28-80mm)

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in hard-to-meter situations was the spot-metering button. Pressing this button, located on the upper-right of the XTsi's back, evaluated a 5.5mm diameter space of the scene. For telephoto shots, I like just a few shapes in the composition, and the spot meter helps me get accurate readings off those few elements in the frame. The spot metering also suited some of the images recorded inside the ghost town's buildings, where contrasty light could deceive an averaging meter.

Autofocus isn't just for the lazy. The XTsi's new cross-hair, three-point autofocus system is impressively quick and absolutely reliable. True enough, the buildings in Bodie are mostly stationary, but I did have a chance to photograph some of the native avian population, whose skittish movements were nailed by the XTsi's autofocus. You can even use spot-autofocus by pressing the AF but-

ton on the camera back. (As an embellishing kind of function, the XTsi can automatically activate and deactivate autofocus and auto exposure with eye-



piece and grip sensors. That way, you don't risk firing a frame by depressing the shutter release too far when only checking focus and metering.)

One thing I found myself using more and more was the XTsi's panoramic cropping, which with the flip of a switch

let me compose with the aid of an internal mask in the viewfinder. It's tempting to think that you're simply wasting film space, that you can intellectualize the panorama and shoot normally. The mask makes composition far easier, though, and it turned out to be a great deal of fun searching for images with a completely different frame in the viewfinder.

The XTsi performed admirably in Bodie's midday heat and chilly mornings. The dials and motions operated well in both situations. I kept the camera out of the rain for the most part, but one thing that gave me confidence is that the camera never seemed to have mechanical trouble from the seriously dusty conditions up there.

I also spent a lot of time shooting in low-angled light, and the built-in flash helped very much for fill. The XTsi also features slow-shutter sync—pressing the spot button sets a shutter speed to balance flash with ambient lighting. In addition, when the flash is turned on, it works as an AF illuminator, automatically firing a rapid

SunDog Photo Packs

During the trip to northeastern California, these lightweight Sundog bags were perfect for carrying a compact camera system like the Minolta XTsi. The Action Telezoom Case holds an SLR body with a telephoto or zoom lens attached. The fitted lid goes over a storm skirt that keeps out the elements. A mesh pocket under the lid is perfect for film and filters, and a roomy front pocket can carry plenty of extra accessories.

The Action Pro Pack is useful if you want to bring along a camera with an extra lens or two. The large bag measures 10x8x8-inches and comes with internal dividers and a storm skirt to thwart rain and dust. Both bags have lids that open away from the body for quick access while you're shooting.

Construction is of tough, water-resistant 420 denier Nailhead fabric and, on the inside, two layers of closed-cell foam that sandwich a rigid polyethylene plate to protect your gear from impact.

List price: Action Telezoom Case—\$45; Action Pro Pack—\$65.

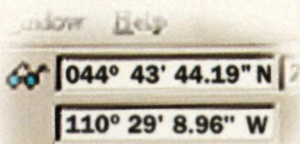
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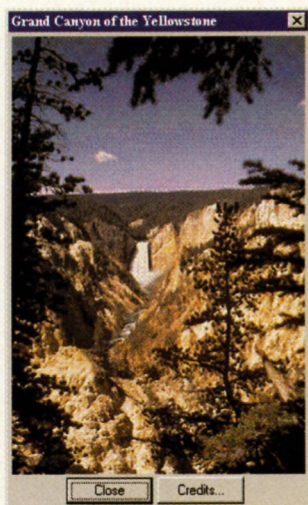
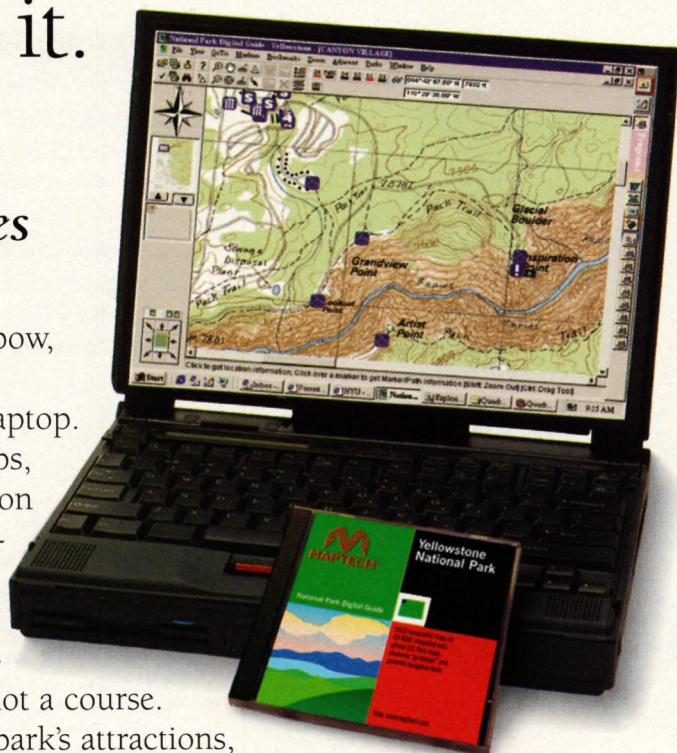
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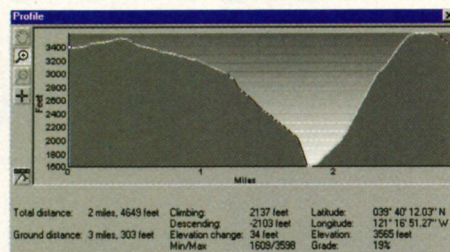
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GHOST TOWN



Giotto Compact Ballheads

The new Giotto professional ball and socket heads have a sleek, compact design and a very appealing brushed-metal finish. The MH1001 medium ballhead on a Manfrotto tripod and the MH1002 compact ballhead with a Gitzo monopod performed well on the Eastern Sierra Nevada trip.

Both fared wonderfully in the alternately hot, cold, rainy and dry conditions. The balls move fluidly in the sockets with just the slightest textured sensation, a nice change from the gooped-up feel of some other ballheads. The MH1001 also features an adjustable friction brake for presetting tension of the camera platform and a detachable platform in case you like to work with a quick-release.

The MH1001 is a mere 12.5 ounces and has a loading capacity of 17.1 pounds; the MH1002 weighs in at 8.6 ounces and can hold 13 pounds. **List price:** MH1001—\$115; MH1002—\$69.

Contact: HP Marketing Corp., (973) 808-9010.

sequence that appears as a constant beam to aid focusing in low-light and low-contrast situations.

The slides I took home were top-quality. The Minolta optics (Minolta Maxxum AF 24-85mm f/3.5-4.5 and Minolta Maxxum AF 100-300mm f/4.5-5.6 APO) gave me sharp and crisp images with accurate colors. All told, the lightweight XTsi provided me with nearly every shooting option and turned out to be a major relief in the pounds of equipment that it let me leave behind. Other features include: five subject program modes, 10 custom functions and a P button that instantly sets the XTsi to full programmed mode.

Contact: Minolta Corp., (201) 934-5308, www.minoltausa.com. **OP**



The Call of AFRICA



The modern face of big game hunting doesn't include the crack of large-caliber rifles—that sound has been replaced by the click of a shutter and the soft whir of a motordrive. The modern big game hunter's weapon of choice is a big telephoto lens and the trophy is a perfect photograph, framed and hung on the wall.

Nevada Wier tried her hand at big game hunting in South Africa on a recent Canon Photo Safari. She and actor Sam Waterston, best known for his roles in the Academy Award®-winning "The Killing Fields" and his current portrayal of a New York district attorney on "Law & Order", photographed the wildlife of the African continent.

Armed with a Canon EOS-1N, a battery of lenses and a compact 540 EZ flash, Wier delved into the Sabi-

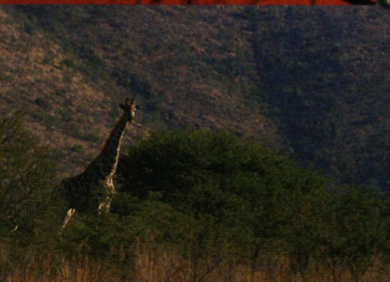
Sabi private game reserve as well as Pilanesberg National Park, among the most highly renowned game parks in Africa.

Wildlife photography is challenging and requires both a quick eye and responsive gear. Wild animals are notoriously uncooperative subjects. Wier found that she was often trying to get photographs in light that was very hard to deal with. Sometimes the sun was high in the sky, making for high contrast, and other times she was trying to get photographs in the dim dusk of the African savanna.

Wier has spent much of her photographic career trying to get a unique look at common subjects. In South Africa, she continued in that vein by experimenting with color infrared film (giraffe at bottom).



Canon Photo Tip 1: A simple catchlight in the eye is quite effective to make the animals come alive in the photographs. Wier used a Canon 540 EZ flash mounted on her camera to get that slight glimmer. Without it, in these lighting conditions, the eyes become lifeless, black pits. Catchlight makes all the difference. "Since I'm just going for a little gleam, the flash is plenty powerful, even with a long [300mm] lens."



Canon Photo Tip 2: Wildlife photo opportunities can present themselves suddenly and without notice, then disappear just as fast. Riding in a vehicle, there's no time or place to set up a tripod, and a monopod serves to transfer the vibrations of the engine to your camera. Wier used the Canon EF 300mm f/4 IS (Image Stabilizer) USM lens to quickly compose, focus and steady handheld photographs made on the fly, even when low light called for slower than desirable shutter speeds. For even more focal length, she was able to add the 1.4X tele-converter for an effective 420mm, yet still retain the AF and IS features of the lens.



The Canon Photo Safari airs Saturday mornings on **ESPN** through December 26, 1998. Check local listings.

Gear Up



▲ L.L. Bean Ascent Parka

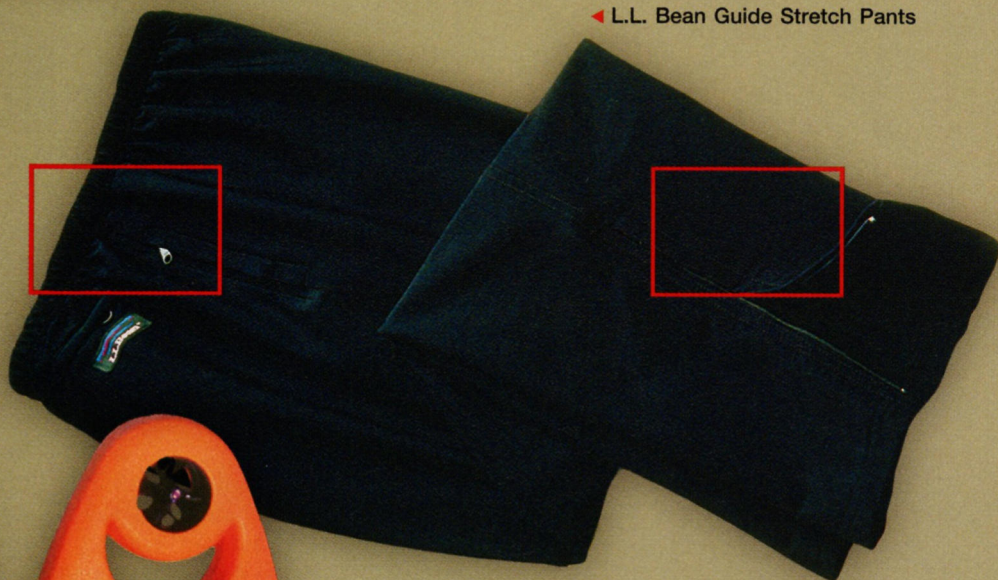
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By Mike Randolph

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Photographing in a backwoods park not too far from my home, there's a spot where I can park at the roadside and reach a 40-foot waterfall after only a short hike. It's not the biggest waterfall there, but it's one of the best subjects. The trout-filled river spills over an enormous slab of granite and plunges into a deep green pool in one thick tongue of water. However, I'm not

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Gear Up For Winter

the only person who knows about it.
On any given day in the summer, you'd
be hard-pressed to spend even five
minutes alone there.

But winter is a different story.
I can grab all the photo gear
I need, stuff it into a back-
pack and spend the whole
day, even a Saturday, and
not see another person. The
cold slows the flow to a
trickle, but every year a veil
of ice with wonderful baroque
formations makes a great sub-
ject for my photo shoots.

I'm sure it's the same where
you live. When the white
stuff flies, a lot of outdoor
photographers stay home,
even though they're missing
out on great photo ops with-
out the crowds. The reason?
Equipment, or lack thereof.
Nothing spoils a photo trip
faster than cold hands or toes.
Winter is a great season for
shooting landscapes and even
wildlife, but without the right clothing
equipment, you won't last very long
out there.

The first thing you need for sub-
zero conditions is a good clothing sys-
tem. When you're hauling a heavy
backpack full of everything from your
80-200mm lens to your tripod to your
thermos full of Colombia's finest brew,
the weight adds up quickly. So does
the work effort, which means your
body's heat output goes off the scale.
Since sweating in the winter is a big
problem (when you stop you'll develop
a bad chill almost immediately), you'll
want to have a few different layers of
varying warmth ratings.

First, underwear. A good pair of
polyester or polypropylene underwear
with a wicking finish will transport
any body moisture to the outer layers
where it can dissipate. Then you'll
want a midweight layer such as a fleece
pullover. And, if it's really cold, you
can go right for a puffy down jacket.
To top it all off, a Gore-Tex™ shell



◀ Wells Industries
Blizzard Proof Polar Suit

will add a wind- and waterproof outer
layer, which is especially important in
milder conditions where you could
encounter wet snow.

From there, it's up to you to fine-
tune your own clothing system accord-
ing to the conditions you expect. Will
light polyester gloves be okay, or will
you need a pair of thick expedition
mitts? Will a simple wool baseball hat
be enough, or should you go for a bal-
aclava? Insulated hiking boots or fleec-
lined mukluks? Consider the conditions
you expect to encounter carefully.
Remember, you'll probably have the
place to yourself wherever you go, so
plan on the conservative side.

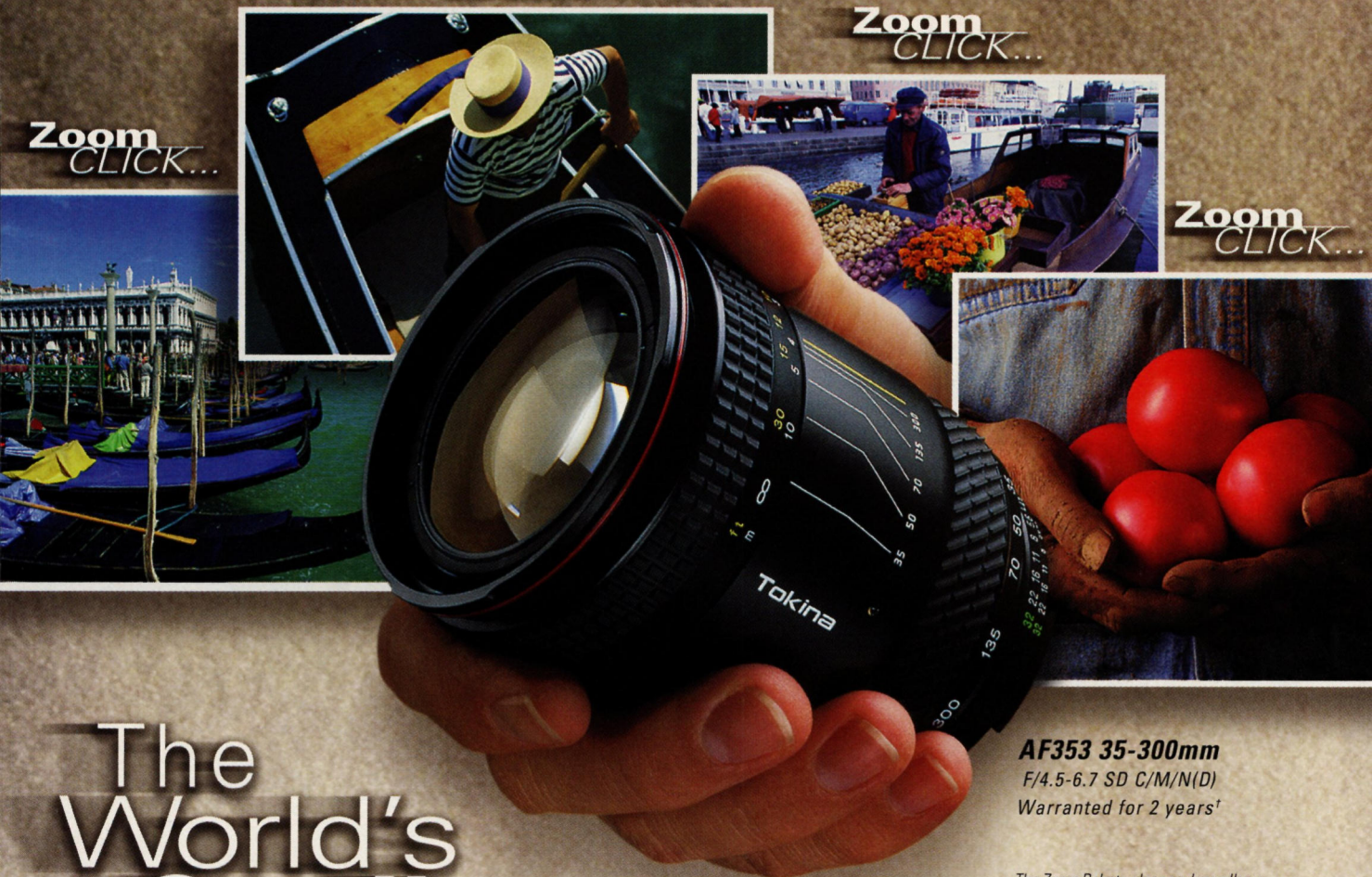
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dition-weight to suit just about any
conditions you can find out there.

Zoom
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Gear Up For Winter

L.L. Bean ▶
White Mountain
Mountaineer Pack



Vasque's Thru-Hikers are made with waterproof 3.0mm Nubuk leather for hard-wearing use. The polyurethane midsole provides good rigidity and protects your feet against sharp rocks, while the high-cut ankle also provides good support, even when you're carrying a heavy pack. These boots also feature the grippy Trekking Outsole for traction on all surfaces.

If you're looking for a simple but well-made outdoor jacket and you don't need all the fancy stuff on a mountaineering shell, take a look at **Columbia's Boulder Ridge Parka**. The Parka has radial sleeves, a detachable hood, nylon shell and, of course, the Boulder Ridge also has Columbia's trademark Interchange system so that you can zip out its MTR fleece jacket and use any one of or all the layers.

Columbia also has a line of new thermal underwear including the expedition-weight **Omni-Therm Stretch**. Cut a little more loosely for highly active hikers, the Omni-Therm Stretch is made of 90-percent polyester and 10-percent lycra, which gives the wind-resistant microfleece a four-way stretch capability.

L.L. Bean says its new **Gore-Tex Guide Gloves and Mitts** are its warmest ever. Waterproofed pigskin palms are reinforced with Neotek for durability. The comfortable, well-wearing outer shell is made of stretchy Spandura II Cordura and the insert is waterproof, breathable Gore-Tex. And, for maximum comfort and warmth, the Guide Gloves and Mitts are lined with soft, brushed nylon and Primaloft insulation. Elastic gathers at the wrist block out wind and, for a nice finishing touch, removable Polartec 200 liners with

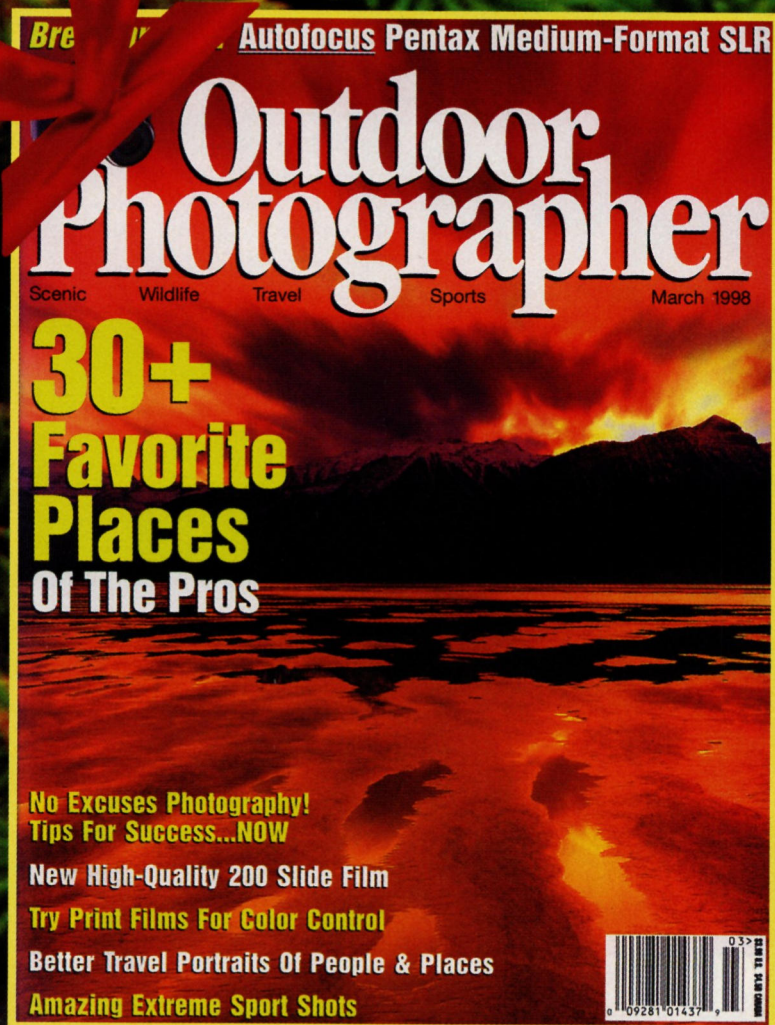
stretch cuffs keep out the snow.

The **Cumulus Pullover** from L.L. Bean is described as a "cold-weather furnace," but this Primaloft-filled pullover is incredibly lightweight. The wind-stopping shell is made of rugged, ripstop nylon. Features include side pockets, a deep front zipper for easy on/off and quick ventilation. The whole works stuff easily into a backpack.

L.L. Bean's **Guide Stretch Pants** are wind- and rain-repellent like a nylon shell, stretchy like tights, yet more durable and breathable than polyester underwear. They're easy to care for, even in the field. Simply hand-wash, hang, and they're dry by morning. These pants are extra-tough, with double-needle-stitched seams and bartacking at stress points. There are two convenient zip side pockets, and the men's pants feature a zippered fly and a back pocket. Plus, Guide Pants slip easily over fleece or long underwear.

A good hat is a must, and L.L. Bean's **Gore-Tex Primaloft Guide Hat** is completely wind- and waterproof. The rugged, breathable, Gore-Tex shell is fully lined with Polartec

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Gear Up For Winter

Revivex From Gore-Tex™

Gore-Tex™ is an incredible product. It keeps you dry in the cold rain and lets your body's perspiration escape so you stay comfortable. And staying comfortable is key to staying outside and making good pictures. First, let's briefly clarify what the Gore-Tex membrane is. It's simply a membrane made up of micro-pores that are too small for a water drop to get through, but are big enough for water vapor to get out. That membrane is laminated to a piece of fabric in your Gore-Tex garment.

For the Gore-Tex garment to achieve maximum effectiveness, the membrane

works in conjunction with a water-repellent coating on the outer layer of fabric. That coating is what causes water to bead and run off when the garment is brand new. Over time, that coating becomes contaminated with a variety of chemicals in the air, rain and your skin. Then the garment begins to "wet-out." Now here's the cool part: Although the coating isn't working as well, the membrane inside is still fully functional. However, the "wet-out" makes the garment feel cold against your skin so it feels like it's leaking.

Because of the cost of Gore-Tex, and because the exact nature of the product is such a mystery (mostly to the salespeople at your local outfitter), people often baby their Gore-Tex garments. There's a

misperception here that a garment

made with a Gore-Tex membrane is some kind of super-fragile, mysterious thing that's going to be destroyed by a spin in the old Maytag in the basement.

Nothing could be farther from the truth. Not only will the periodic wash-spin, rinse-spin not harm it, it's necessary to keep the garment in top working order. A full wash and a tumble dry with heat are absolutely safe and will ensure that the garment remains as effective as the day it was bought. The washing will get most of the contaminants off, while the heated dry will actually revitalize the water-repellent coating itself.

What about when the coating is just totally whipped and a wash and dry doesn't seem to help? This might happen at some point, but don't panic—Gore has a product that will fix you right up. The new Revivex sprays right on and puts a hydrophobic coating back onto the garment. To apply the Revivex, all you do is wash the garment; then, while still wet, spray on the Revivex. The chemical itself will get wicked evenly on the garment. And, because jackets made with Gore-Tex membranes have non-wicking inner materials, it won't coat the liner and prevent your body's moisture from escaping. **Contact:** Gore-Tex, (800) 431-GORE.



200 and insulated with 1.8-ounce PrimaLoft. The Guide Hat comes in two sizes, and you can adjust it with a strap on the outside back. A fold-down visor helps keep out sun and wind, and fold-

up ear flaps keep out cold. A cinch cord lets you tighten the ear-flaps for extra coziness.

(Cont'd on page 110)

A black and white photograph of three penguins standing on a snowy surface. The penguin in the center is facing forward and has a large, bright green logo on its chest. The logo consists of a triangle with a circle inside it, and another circle to the right of the triangle. A speech bubble above the penguin's head contains the text "MAYBE NOW CARLA WILL NOTICE ME.".

"MAYBE NOW CARLA WILL NOTICE ME."

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EXTRA-VIBRANT COLORS

Make your images glow with the new
Kodak Elite Chrome Extra Color 100

Text And Photography By Rick Sammon

Color. I look for it everywhere, especially in my camera's viewfinder. In fact, I often compose a picture solely with color impact in mind. I also look closely at the colors in my slides, asking myself if they represent the image I saw in my mind's eye when I froze the moment in time.

It's this "mind's eye image" that determines the type of film I'll use. In other words, I'll choose the film that helps me translate the scene onto the emulsion in the same manner that I personally imagined and intended it. Artists who work in oils, watercolors, colored pencils, etc., feel the same way. They select different colors or shades of colors to represent on canvas or paper their "mind's eye images."

The process of color interpretation is interesting to consider because no two people interpret and see colors on

a print, slide or computer screen in exactly the same way. (This fact was proved, incidentally, by Josef Albers, author of *Interactions of Colors*, through many experiments.) Even though you and I see colors differently, it's a sure bet that we both want great colors in our slides, right?

How we see color fascinates me, especially in that our eyes are sensitive only to three wavelengths of light: red, blue and green. All the colors we see, therefore, are created by mixing these colors. I'm also fascinated with film and its magical ability to record colors, details and memories, all at the touch of a button.

As you can tell, I'm tuned in to color. Thankfully, 35mm shooters have many films from which to choose to interpret a scene in their own special way. One of the newest slide films for discerning photographers is Kodak's Elite Chrome



Extra Color 100, developed to deliver enhanced color saturation.

I shot this new film extensively on a recent trip to the Bahamas and after that on several test sessions at home. My goal was to show the beautiful colors of the Caribbean and use the images in my slide presentations at the Palm Beach Photographic Workshop, in my magazine articles, as illustrations for my books and for scanning into my computer.

Before I go on, you Photoshop-savvy shooters may say that you can easily increase the color saturation of

a picture in your image-editing software. No doubt. But, as I tell aspiring shooters in my photo classes, it all starts with a slide. Beginning with the best image will give you an easier path to the best final image. Slides are projectable, scannable and, most importantly, they're the original interpretations of your vision.

This was my fourth trip to the Bahamas, a location I've photographed above and under water since 1980. This time around, I wanted extra color in my travel pictures because, among other reasons, I've been there, done that, got the T-shirt and had the fish sandwich. The new film gave me an incentive, even a touch of inspiration, to shoot new pictures.

I shot from dawn to dusk, using a variety of lenses: 15mm, 20mm, 24mm, 50mm macro and 70-200mm zoom. While I was shooting, I felt a bit more creative with a new film loaded in my camera. I had fun!

A note about my shooting technique: I bracketed my exposures (at the very least by a ½-stop on either

side of dead-on) to ensure a correct exposure. Bracketing is especially important in locations like the Caribbean, where glare on sand and water can fool a camera's light meter into making a wrong automatic exposure decision. (Yep. I shoot on the automatic modes.)

I didn't use an 81A warming filter as I usually do because for me the film eliminates the need for one. I did use my constant tropical photography companion, a circular polarizing filter, to reduce glare on water and windows and to darken the blue sky. Due to the film's extra color saturation, however, I found that I didn't have to dial in the full degree of polarization to get a deep blue sky.

Back home, I was anxious for my slides to be returned from the lab. When they arrived, I dashed off to my light box. The colors were simply brilliant. The reds, yellows, pinks and blues popped with brilliance while the whites remained white and the blacks remained black. The extra color was made possible by a color-enhancing

film layer, a new invention in film technology, according to the folks at Kodak. Under an 8x loupe, the film seemed to have the grain structure and sharpness of other 100-speed films I've used—Kodak's T-grain® technology at work.

Until now, I hadn't seen this type of color saturation in a 100-speed film, although it's available in slower speed films. The added speed let me shoot at a smaller *f*-stop for more depth of field or a faster shutter speed to stop action, important when shooting from a bobbing boat, which I did on a few occasions. Put yet another way, the faster speed let me shoot in a wider variety of situations without sacrificing an *f*-stop or shutter speed. What's more, I didn't have to underexpose the film slightly to get more saturation in my images. (Some pro shooters, for example, expose Kodachrome 64 at ISO 80 and use standard processing to achieve a similar effect.)

My take on the film: I'm pleased with the way Elite Chrome Extra Color 100 helped me illustrate the colors of the Caribbean landscape, seascape and nature scenes; the beautifully painted buildings look exquisite, too. Elite Chrome Extra Color 100 (available in 24- and 36-exposure rolls) broadens the Kodak Select Series of films, which also includes Royal Gold, Kodachrome and the other Elite Chrome films.

You may have noticed that I didn't mention people pictures (my specialty) anywhere in this article. That's because Elite Chrome Extra Color 100 is designed specifically for outdoor and nature photography. So, when I encountered friendly islanders willing to be photographed, I used Kodak's Elite Chrome 100 or Elite Chrome 200.

Like all Kodak Select Series films, the new Elite Chrome Extra Color 100 is packed in clear canisters, an important feature for travel shooters who dislike being asked at airport security stations to open each and every canister of film to see what's inside.

I'm thrilled with my new Bahamas images. You might want to give this film a shot the next time you want extra color in your slides and when you want to have some extra fun and feel more creative, as well.

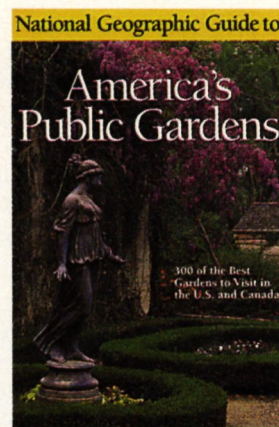
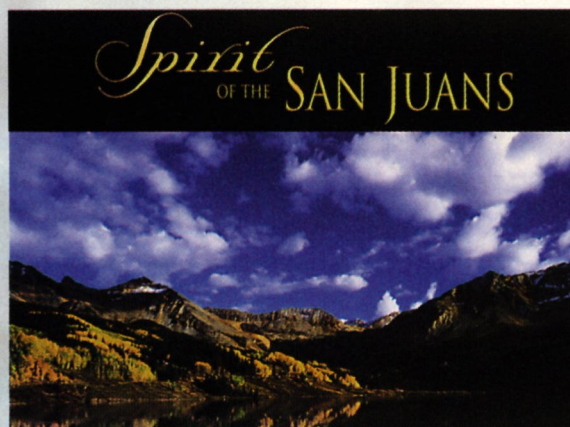
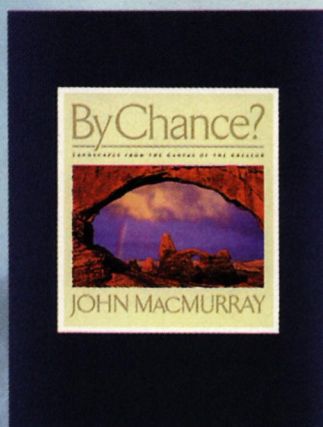
Contact: Kodak, (800) 242-2424, www.kodak.com. OP



Photographing in as colorful a location as the Caribbean can be frustrating when you find that your film isn't up to the task. After all, not all color films are created equal. The new Kodak Elite Chrome Extra Color 100 slide film helps you bring home the bold colors that caught your eye when you were taking the picture. These images show the film's broad range and saturation across the spectrum.

SKY, FLOWER: Canon EOS-1N, Canon 20mm; HOUSE: Canon EOS-1N, Canon 24mm





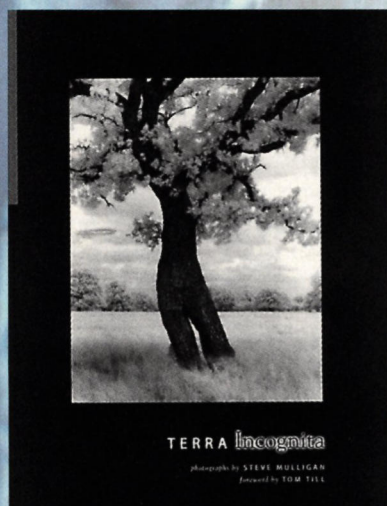
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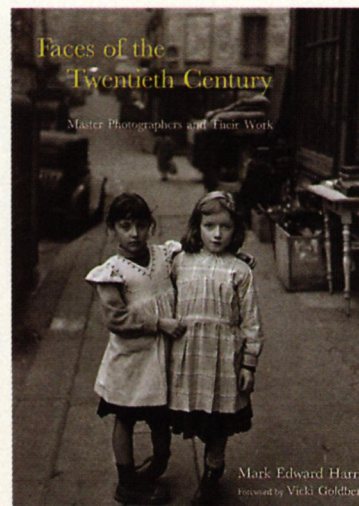
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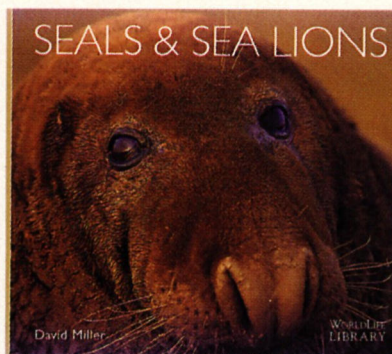
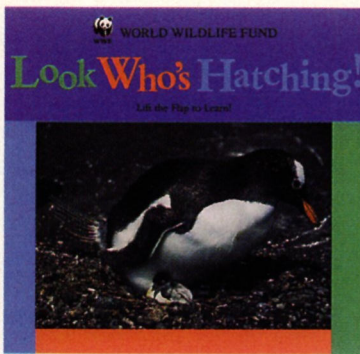
We've collected a variety of good
holiday reading for enthusiasts of all ages

By The Editors



This year's book guide has plenty of titles for readers both young and old. Spend some quiet time during the holidays exploring grand landscapes from around the world, touring America's scenic places or getting tips for improving your photography. Of course, you'll find spectacular images throughout these volumes, making them ideal gifts for friends and family.





High Above The Canadian Rockies by Russ Heintz (Firefly Books, 1998). A bird's-eye view of the Canadian Rockies from the U.S. border to the Yukon. Magnificent vistas, glimpses of wildlife and the presence of man are the subjects of Heintz's aerial photography.

America's Public Gardens by Mary Zuazua Jenkins (National Geographic Society, 1998). Take a guided tour of 300 outstanding public gardens found here in North America. You'll learn the history of each garden and the best times of year to visit.

By Chance? by John MacMurray (Multnomah Publishers, 1998). Beautiful photos from around the world are complemented by inspirational quotations.

Look Who's Hatching; Where Do I Live? from the World Wildlife Fund (Cedco Publishing, 1998). Two fun and educational picture books for children, featuring close-up photos of favorite wild animals.

Terra Incognita by Steve Mulligan (University Press of Kansas, 1998). Stunning black-and-white nature photography from a contemporary photographer in a style reflective of the great masters. Mulligan's photographs present a provocative dialogue between form and light.

Northern Sandscapes by Robin and Arlene Karpan (Parkland Publishing, 1998). Explore the diverse ecology of the Athabasca Sand Dunes and the surrounding beauty of Lake Athabasca in the Saskatchewan wildlands.

Seals & Sea Lions by David Miller (Voyageur Press, 1998). Get up close and personal above and below the waterline with two of the more charming species of ocean-dwelling mammals.

Howling Hill by Will Hobbs and Jill Kastner (Morrow Junior Books, 1998). This book for young readers tells the story of Hanni the wolf. Caught in a rushing stream and swept away from her pack, her adventures inspire her to grow as she finds her way home.

Faces Of The Twentieth Century by Mark Edward Harris (Abbeville Publishing, 1998). A collection of black-and-white photography showcasing the work of some of this century's most notable portrait photographers. Most interesting is Harris' portraits of these photographers and excerpts from personal interviews.

Land Navigation For Outdoor Enthusiasts by Bob Newman (Menasha Ridge Press, 1995). Covers the basics of finding

your way around the wilderness, from using a compass to modern GPS systems.

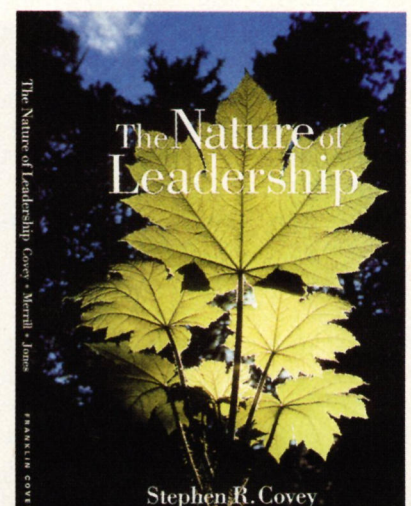
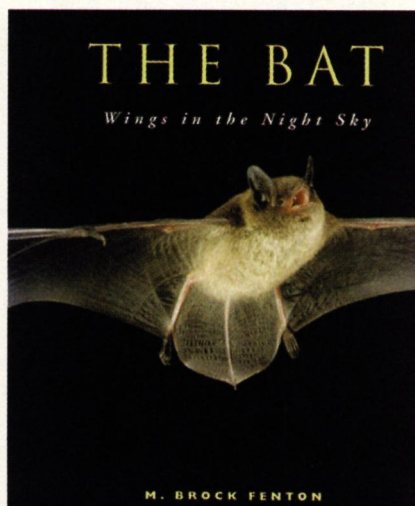
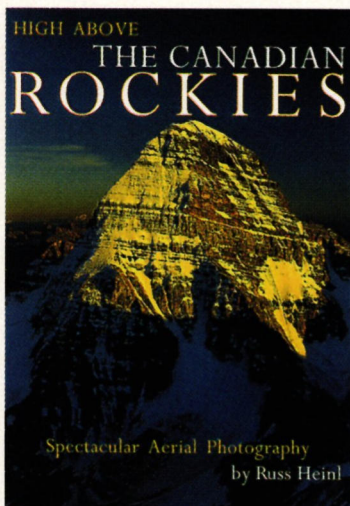
The Bat: Wings In The Night Sky by M. Brock Fenton (Firefly Books, 1998). Fenton's photographs bring you an in-depth look at this mysterious and fascinating animal.

Traveler's Tool Kit by Rob Sangster (Menasha Ridge Press, 1996). A how-to guide for travelers. Regardless of destination, virtually every topic is covered, from planning your trip to arriving back home.

Spirit Of The San Juans by Kathleen Norris Cook (Western Reflections, 1998). A magnificent portrait of this rugged mountain range in southwestern Colorado. Cook's photographs are complemented with intelligent quotations and brief biographies of a few San Juan inhabitants.

Washington's Mt. Rainier National Park: A Centennial Celebration, photographs by Pat O'Hara, text by Tim McNulty (Mountaineer's Books, 1998). Explore majestic Mt. Rainier through the photography of Pat O'Hara and learn the history of this revered volcanic peak.

The Nature of Leadership, with photography by Dewitt Jones (Franklin Covey, 1998). Enjoy the remarkable tal-



ent of nature photographer Dewitt Jones while exploring the principles of successful business leadership from best-selling authors Steven R. Covey and A. Roger Merrill.

The Year Of The Tiger, photographs by Michael "Nick" Nichols (National Geographic Society, 1998). In a remarkable encounter with one of the world's most elegant and beloved animals, award-winning *National Geographic* photographer Nichols aims to draw attention to the struggle this endangered species faces.

Watch Us Play by Miela Ford (Greenwillow Books, 1998). Light-hearted and geared for young children, this book springs from photographs of two lion cubs at play.

How To Photograph Flowers by Heather Angel (Stackpole Books, 1998). Tips to improve your photography of flora, both technically and conceptually, from a noteworthy nature photographer.

The Field Guide To Photographing Gardens by Allen Rokach and Anne Millman (Amphoto Books, 1998). Rokach, senior photographer for *Southern Living* magazine, presents tips and approaches to capturing the essence of any garden.

Creative Black And White Photography by Bernhard J. Suess (Allworth Press, 1997). Improve your exposures and darkroom results with advanced tips for black-and-white photography. Use of filters and darkroom techniques are stressed and supported by illustrative photos.

The Nikon Field Guide by Thom Hogan (Silver Pixel Press, 1998). Geared as a reference for the Nikon user, this guide contains plenty of information useful to the photographer in the field, from complete explanations of program modes and flash settings to more general tips for getting good exposures.

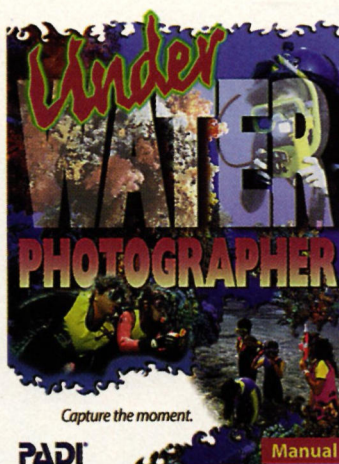
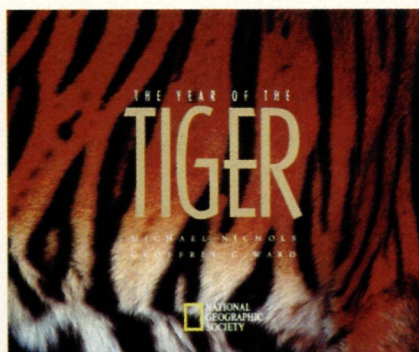
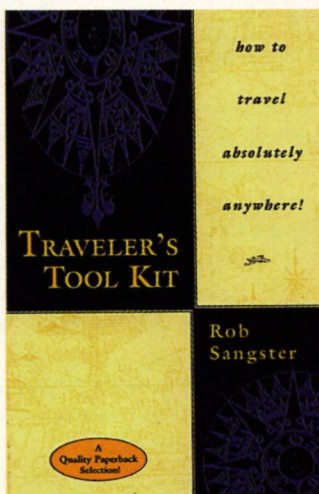
Photography For Dummies by Russell Hart (IDG Books, 1998). Make the most of your photo equipment, choose the right film, find a good lab and learn to compose visually pleasing photographs. No matter how little you know about photography, this book is for you if you want to take better pictures.

Photoshop 5 For Windows And Macintosh by Elaine Weinmann and Peter Lourekas (Peach Pit Press, 1998). Master Photoshop techniques and gain serious control over your images. Screen shots and clear explanations of controls and techniques makes getting started with this powerful program easy and enjoyable.

Underwater Photography (PADI, 1997). If you've ever wanted to get involved

BOOKS

Worth a LOOK



in underwater photography, this book and companion video is a great place to start. Learn about caring for your gear, making good exposures and more.

Kodak Professional Photoguide, (Kodak Books, 1998). The all-in-one reference for technical information. Films, exposure guides, filters, lenses and flashes are all covered and indexed for easy reference.

1999 Photographer's Market (Writer's Digest Books, 1998). A definitive guide for the freelance photographer. Learn who to approach and how to approach them, from magazine editors and stock photo agencies to advertising firms and galleries. **OR**

Resources

Abbeville Publishing
(800) ART-BOOK
www.abbeville.com

Allworth Press
(800) 491-2808
www.allworth.com

Amphoto Books
(800) 278-8477

Cedco Publishing
(800) 752-3326
www.cedco.com

Firefly Books
(800) 387-5085

Greenwillow Books
(800) 237-0657
www.williammorrow.com

IDG Books
(800) 762-2974
www.dummies.com

Kodak Books (Sterling Publishing)
(800) 367-9692
www.sterlingpub.com

Menasha Ridge Press
(800) 247-9437
www.menasharidge.com

Morrow Junior Books
(800) 237-0657
www.williammorrow.com

Mountaineer's Books
(206) 223-6303

Multnomah Publishers
contact your local bookseller

National Geographic Society
(800) 437-5521

PADI
www.padi.com

Parkland Publishing
(306) 242-7731
www.skyport.com/parkland/dunes

Peach Pit Press
(800) 283-9444
www.peachpit.com

Silver Pixel Press
(800) 367-9692
www.sterlingpub.com

Stackpole Books
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University Press of Kansas
(785) 864-4154

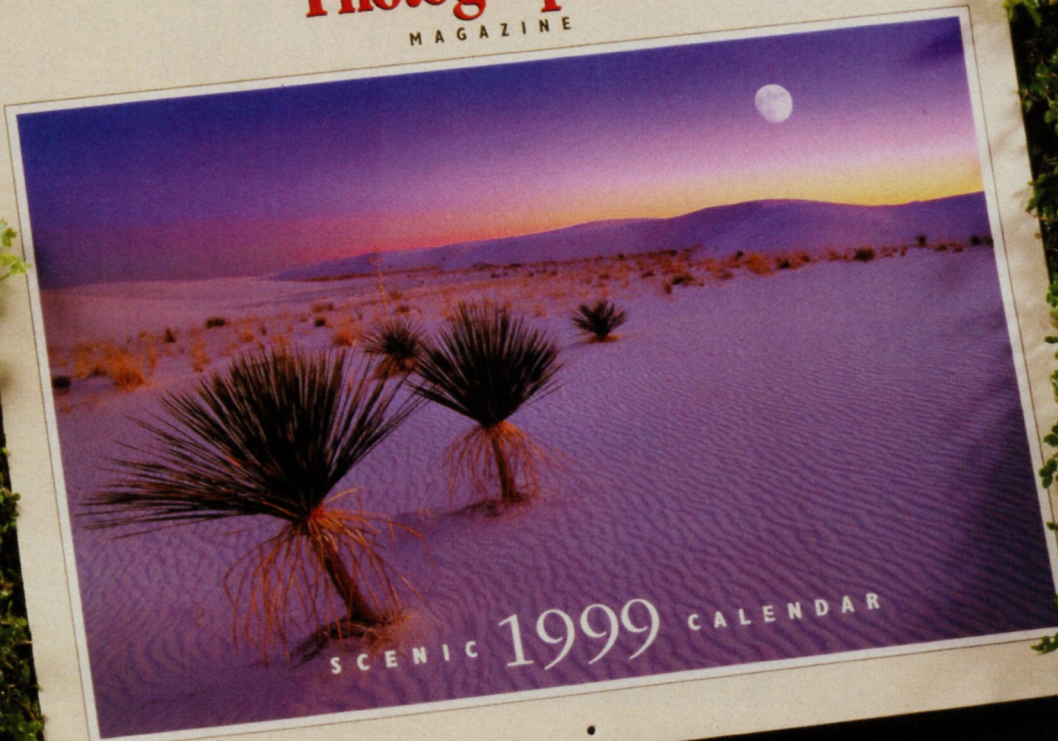
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Outdoor Photographer

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Web Sites

For Photographers

Discover the vast amount of photographic information available on the Internet

By John Wilbanks

Get a group of photographers in a room, and sooner or later the topic of technology will come up. Technology isn't sneaking up behind us these days; it's coming at us full speed and, more often than not, head on. The Internet is one of the technologies that can leave you baffled your first few times out. Just do a search for photography, and you'll get a list of more than 100,000 sites, most of which you probably wouldn't be interested in.

However, there are a number of sites that I've found to be particularly useful, especially for outdoor photographers. I've been visiting some of these sites for a year or more; others I've only recently discovered. These are all worth checking out and can make both the business and adventure of photography a bit simpler.

► National Park Service

Park Information
www.nps.gov

Follow the "Visit Your Parks" link, and you'll find information on everything from choosing a park and making reservations at parks that require them to preparing for your visit and getting there. You can locate parks at this site using state maps, detailed regional maps or search by park name. There's also information on Wild And Scenic Rivers and lesser known parks, plus the address and telephone number for each park.

► Sunrise/Sunset Times

Worldwide
www.cmpsolv.com/los/sunset.html

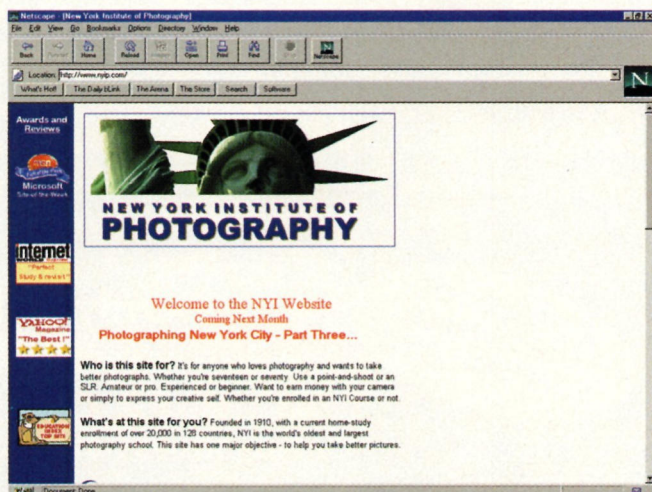
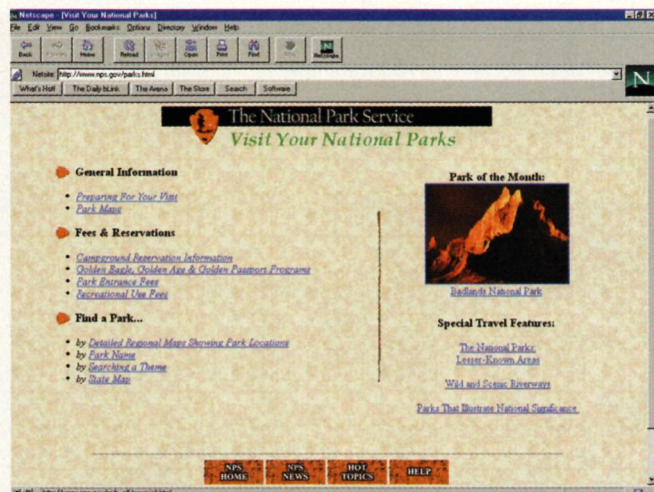
Here's a truly utilitarian site that calculates sunrise/sunset times for a region which you can specify using city names, longitude/latitude or even airport names. There are reports of when twilight starts, when the sun rises, when it sets and when twilight ends. Information regarding when the sun is at its peak for the day is also available. Enter the date you want the report to start with and how long a period you need the report to cover (one

day, one month or one year). A quick calculation results in a readout that you can print and take with you on your photo trip.

► Photo News Network

Photography Forums
www.photonews.com

Click on the "Forums" link to subscribe to e-mail discussion lists, which deal with subjects like wedding photography (photowed), digital photography (photodigital), stock photography (photostock) and technical concerns of photography and photographic equipment



(phototech). In the professional photographer's forum (photopro), professionals from the world over with years of industry experience interact with people just entering the industry. Each of these discussion lists is a wonderful resource for gaining valuable information about the topics that interest you.

► Online Photography Workshops

Topical Discussions

www.photo-seminars.com

Here's a good resource for a variety of photographic information. The site is set up to be a virtual campus, replacing the wait in line for classes with the wait online for downloads. All kidding aside, there's an abundance of photographic topics covered here on most all things. In addition to multiple seminars, there's a dark-room section where you can learn special dark-room techniques and considerations. Topics are constantly being added and revolving—it's just like going to photo school all over again.

► New York Institute Of Photography

General Photography Tips

www.nyip.com

A good site for photography tips, each month it covers a different topic based on frequently asked questions. The photo review section discusses why a photograph works and how it could be improved. The digital photography and "Monthly Topic" sections are also well worth looking at for help in improving your photography.

► Camera Dealers

New And Used Equipment

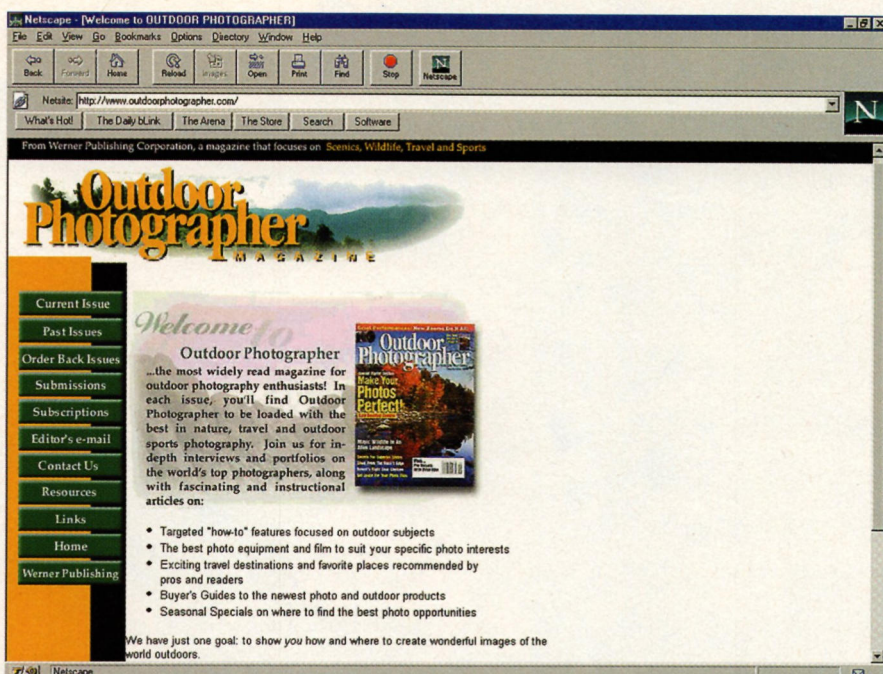
Many camera retailers have well-organized sites with progressive links to more and more specific information. Check out these sites if you want the details of a specific product or to compare equipment from various manufacturers. Often, these sources provide a greater detail of information than manufacturer sites, particularly concerning product specifications and actual retail price.

► WWW Photo Zone

Lens & Body Comparison

www.cmpsolv.com/photozone

A great resource for comparing cameras and lenses when it's time to make a new purchase.



chase. The "Camera Features" link groups various camera models into subsections of Pro, Semi-pro, Midrange and so forth. You can compare cameras by their features, price and ratings from a variety of photo magazines and other informed sources. The "Lens Review" section details the results of surveys of various lenses. This information is gathered by surveying actual users, so you won't find manufacturer hype here, but plainspoken user opinion. The survey chart compares ratings of performance, distortion, flare, quality of build and vignetting.

► Outdoor Photographer Magazine

www.outdoorphotographer.com

Visit the magazine's Web site to get extensive contact information for photo equipment manufacturers and for links to related Web sites. You can also get the lowdown on current and past issue topics, order back issues and submit questions for the editors. Information is being added all the time.

► PCPhoto Magazine

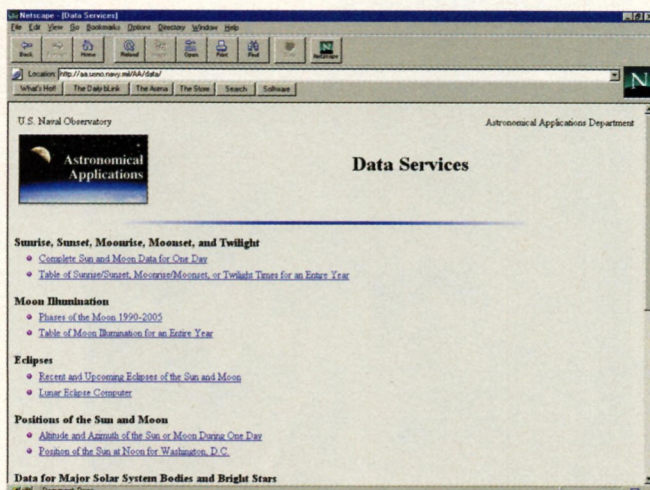
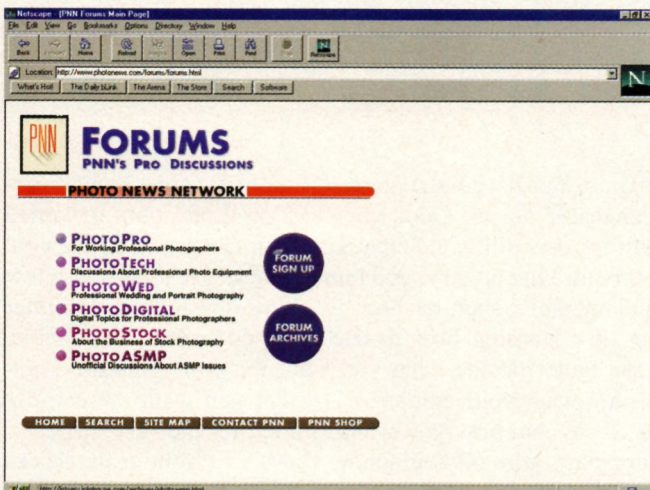
www.pcphotomag.com

This is a great site to learn about using new technology as a tool for improving your photography. Find out what's new and exciting in this continually evolving arena, from good techniques to hot new products. Link to other informative sites, get manufacturer contact information or e-mail the editors.

► Manufacturers' Sites

Industry Information

Often, a manufacturer's Web site is simply their name and the usual protocols, so it's frequently possible to guess the site address (www.manufacturer.com). Another quick route is to use a search engine such as Yahoo (www.yahoo.com) or Excite (www.excite.com) and search for the manufacturer's name. Usually, this will yield a large number of results, particularly for larger manufacturers, but the company's official Web site should be fairly prominent in the list. **OP**



Learn to control
your image by
mastering these
basic camera
controls

*By Christine F. Ridout
Photography By
Budd Titlow*

Shutter Speeds & *f*-Stops

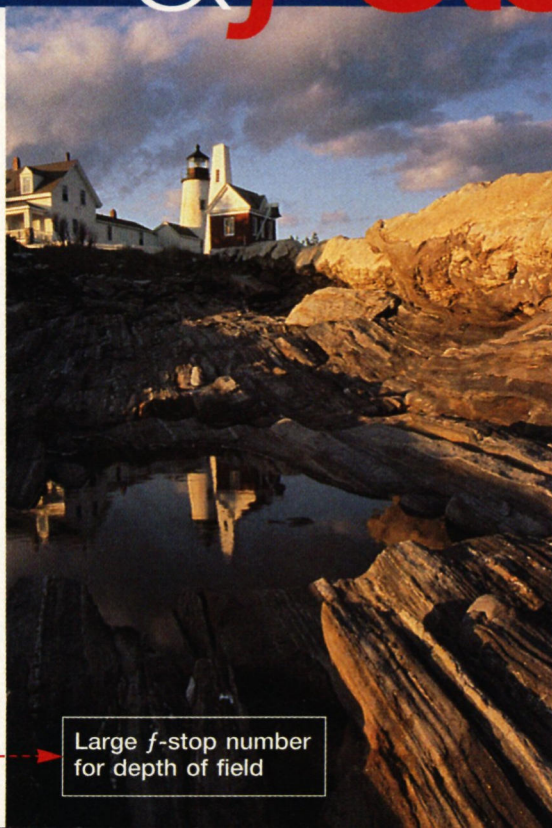
Slow shutter speed
for blurred action



Fast shutter speed
for stopped action



Large *f*-stop number
for depth of field



It's time. You've got that great 35mm SLR camera with interchangeable lenses. Good choice: You'll be richly rewarded with the versatility and creativity your camera will give you. But before the artistry, you know you've got to master a few fundamentals, such as how to choose *f*-stops and shutter speeds. By learning how to use these controls, for example, you can better decide what you want the photograph to communicate, what your emphasis is, what you want the composition to say and how you want to interpret the subject.

Suppose you're photographing flowers in front of the Rockies. Do you want to emphasize the flowers? If so, move in for

a close-up and blur the background, making the blossoms the focus of the picture. Maybe you want to photograph both the flowers and the mountain—this can be accomplished by setting the camera to keep focus on both.

The most basic principle of photography is the relationship between shutter speeds, *f*-stops and depth of field. Shutter speeds and *f*-stops are primary creative tools of photography, the ones that enable you to create unique, personal photos.

Shutter speeds and *f*-stops work in concert to produce proper exposures. Visualize your camera as a window with a shade and shutters. The window is your lens, the window shade is the aperture (an adjustable opening represented by *f*-stop numbers) and the window's shutters is the shutter in your camera body. The amount of light coming through the window (the lens) is determined by how much of the window is covered by the shade (the aperture). The amount of light reaching the film depends on how fast the shutters open and close.

To achieve proper exposure, the size of the aperture opening and the shutter speed must be balanced. It's like balancing the scales of justice: A change on one side requires an equal change on the other. Thus, a full change in aperture opening (represented by *f*-stops) requires a full stop change in shutter speed. For example, a change from *f*/8 to *f*/11 requires an equal adjustment of shutter speed ($\frac{1}{125}$ to $\frac{1}{200}$ sec.) to keep the scale—your exposure—in balance.

f-stops describe how open the aperture is. Here's the confusing part: **In photography, the smaller the *f*-stop number, the larger the aperture.** Thus, *f*/4 represents a larger aperture and lets in more light than *f*/22, which is a smaller aperture and lets in less light. Moving from a large to small opening is called "stopping down" your lens (you end up with a larger *f*-stop number for a smaller aperture opening). "Opening up" your lens means

using a smaller *f*-stop number, admitting more light through a larger aperture opening.

The actual choice of *f*-stop and shutter speed depends on the effects you want to achieve. One usually takes precedence over the other. If freezing action is your priority, you need a fast shutter speed, which must be balanced by a larger aperture opening. Conversely, if blurring motion is your priority, you need a slow shutter speed,

movement, using a fast shutter speed ($\frac{1}{2000}$ sec.) balanced by an aperture opening of *f*/5.6.

Similar choices must be made about depth of field. Depth of field means how much of your photo is in focus from front to back: all of it (maximum depth of field) or part of it (shallow depth of field). Shallow depth of field emphasizes the main subject of your shot by focusing sharply on that object and blurring the rest of the photo. Because of the blurring, the eye is drawn to the object in focus, hence the term, "selective focus."

Shallow depth of field is achieved with large aperture openings. Remember, this means a smaller *f*-stop number—*f*/4 gives shallower depth of field than *f*/16.

In a photo where the photographer chooses to emphasize the subject without interference from background clutter, you could select *f*/4 to blur the background with shallow depth of field. The eye is drawn to the subject, ignoring the blurred background. You can balance the large aperture opening with a faster shutter speed.

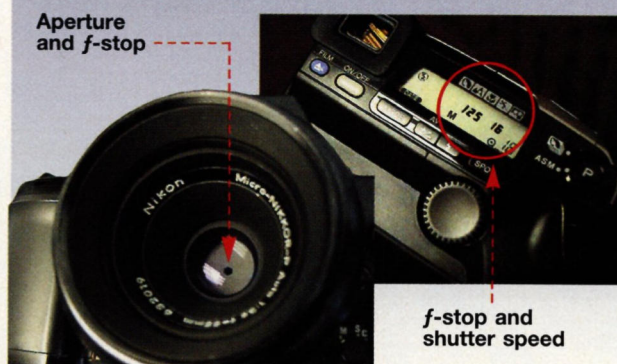
In contrast, maximum depth of field focuses everything in the photo. This is useful for landscape shots where the entire shot needs to be in focus and requires a small aperture opening (*f*/22, *f*/16). In the

photograph of the lighthouse at Pemaquid Point, Maine, the photographer wanted to capture the reflection of the lighthouse in the tide pool, the pattern of the rocks and the lighthouse and clouds in the background. Thus, he needed maximum depth of field (*f*/22) to focus the entire photo.

Photography is a creative art, one that encourages personal choices about the interpretation and presentation of an object, person, animal or scene. Each photographer makes unique decisions reflecting his or her own view of the world. Once you can control your shutter speed and *f*-stop for creative effect, you have the perfect tool to enable you to express your artistic self through photography. **OP**

What Is An *f*-stop?

The term "*f*-stop" gets bantered around a lot in photography. Most photographers don't really know exactly what an *f*-stop is, however. Well, here it is: The term *f*-stop expresses a ratio between the focal length of the lens (at infinity) and the area of the aperture. Because *f*-stops are a fraction of the focal length of the lens, the same *f*-stop will transmit the same amount of light to the film even though the physical size of the aperture is different for different lenses. Only the denominator of the fraction is printed on the lens barrel, which is why you get a smaller aperture with a larger number. Go out and impress your friends with this little tidbit of photographic knowledge.



Aperture and *f*-stop

f-stop and shutter speed

balanced by a smaller aperture. Because capturing motion is your goal here, shutter speed takes priority ("shutter priority") over aperture.

The photos of the sage grouse and the whale illustrate these points. In the photo of the grouse, the photographer wanted to capture motion. His creative decision, however, was to capture it by *blurring* the action. The photographer selected a slow shutter speed ($\frac{1}{50}$ sec.) balanced by an aperture opening of *f*/11. Had he chosen to freeze motion, he would have needed a fast shutter speed (at least $\frac{1}{500}$ sec.) balanced by a larger aperture opening.

In the whale image, the photographer made the opposite choice about motion: He chose to freeze the whale's

Pack In For Better Pix!



Eureka!'s new Atlas pack's advanced design gets you and your gear to your backcountry photo destination

*Text And Photography By
Jerry And Marcy Monkman*

The Eureka! Atlas has an innovative frame and compression system to keep loads balanced and comfortable on your back.

For many outdoor photographers, backpacking into remote wilderness locations is an important part of making photographs. The wilderness I encountered while first backpacking several years ago definitely inspired me to embark on a photography career. This has put me in constant search of a backpack that will help me carry my ever-expanding collection of gear without a lot of discomfort. So I was excited to experiment with Eureka!'s new style of backpack, the Atlas—a unique attempt at creating a better way to carry gear into the backcountry.

Eureka! designed the Atlas backpack to be very stable and carry different-sized loads comfortably. A lightweight plastic frame runs from the lumbar region of the back to the top of the neck. This frame wraps around the body in a way that transfers the weight of the pack to the top of the hip, away from the lower back. Attached to the frame is a jointed, three-piece hip belt that pivots as you walk, remaining in constant contact with your hips and keeping the weight of the pack evenly distributed.

Finally, Eureka! attached a packbag that was designed with stability in mind. The Atlas has an extensive compression system. Delrin rods and compression rope compress the entire load evenly and keep your contents from shifting. Like many internal frame packs, the Atlas has straps to stabilize the top of the pack by connecting it to the shoulder straps. The packbag is connected to the hip belt by a pair of lumbar straps that stabilize the bottom of the pack.

We had the opportunity to try this loadable pack on a photo hike into New Hampshire's White Mountains, where we hoped to find some unique locations for woodland scenics. While so much can be photographed within proximity of roads or on short day hikes, seeking out backcountry locations serves to fuel our creativity and enthusiasm with a special sense of discovery. Further, camping on location makes it more convenient to be in the right place at

the beginning and end of a day when light is right.

Comfort proved to be the Atlas' most impressive feature. We were surprised to find that the high-tech, funky-looking frame actually did transfer all the weight of the pack to our hips. My shoulders and neck never tired, even with upwards of 60 pounds of gear in the pack. The swiveling hip belt seemed to help as well. Generous padding on the hip belt and shoulder straps added to the comfy feel of the pack. Although my hips were supporting the load, I didn't experience any chafing on my hips like I have with other packs.

The compression system works well for any amount of gear and keeps everything stable. The medium version of the Atlas can expand from 2850 to 6680 cubic inches, plenty of room to carry enough gear to spend several days out in the backcountry.

Filled with 60 pounds of gear (easy to do when you've got camera equipment), the Atlas was very stable while we hiked the Zeacliff Trail in the Pemigewasset Wilderness Area. The trail drops 1400 feet in 1.2 miles and, according to the AMC White Mountain Guide, "...is extremely steep and rough in parts and not recommended for hikers with heavy packs." I found it easy to keep my balance on the trail while wearing the Atlas.

There are plenty of other features:

- ▶ The rigid frame sits away from your back, improving air circulation and keeping you cooler while you hike.

- ▶ Water bottles—even lenses—can be carried in the mesh pockets on each side of the pack and are easily reached without taking off the pack.

- ▶ Multiple pockets on the inside of the pack make it easy to organize gear.

Eureka! provides a standard lifetime warranty for the Atlas. With a suggested retail price of \$399, the Atlas is priced at a similar level as other high-end backpacks, but if you want comfort and stability while carrying heavy loads, it's well worth the money.

Contact: Eureka!, 1326 Willow Rd., Sturtevant, WI 53177-0901, (800) 572-8822, www.jwa.com.

OP

Black Diamond Attack Pack



Every once in awhile, a company makes a product that seems to have almost nothing to do with an outdoor photographer, yet it's perfect for us. The Black Diamond Attack Pack was designed for rock climbers looking for a small, lightweight daypack suitable for carrying crampons and ice axes. The exterior pockets for these items happen to be almost ideal for a tripod or monopod.

The pack itself is nice and light and roomy enough to fit a camera body, a couple of lenses, a jacket and lunch. There's also a pocket to hold an optional water tank—the tube is attached to the shoulder strap for easy access. Beefy shoulder straps and a hip belt keep the load steady and the weight well distributed.

The Attack Pack weighs 2 pounds, 7.4 ounces and has a volume of 1800 cubic inches. **Contact:** Black Diamond, (801) 278-5533.

Fieldline H₂O Field Packer

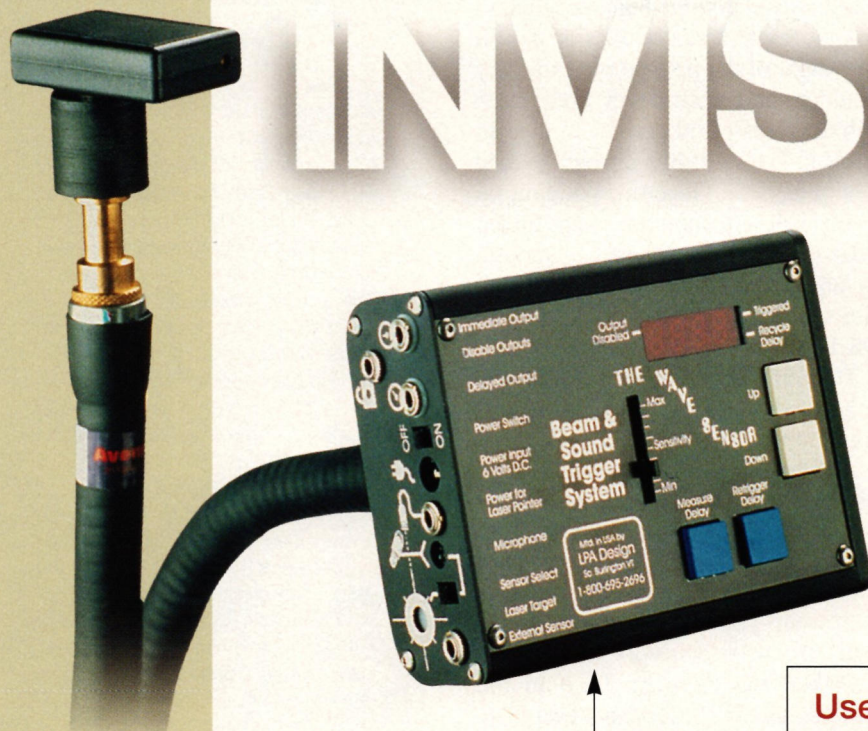


A day stalking ever elusive wildlife subjects requires the right gear. Most critters will hear a human traipsing about in the latest outdoor garb and may quickly depart. For these adventures, being camouflaged and silent can make the difference between coming home with stunning animals or a roll of landscapes. Not that there's anything wrong with landscapes; it just may not have been what you wanted to get.

Fieldline's H₂O Field Packer gives you a camo backpack made with polyester fleece or the company's new Quiet Cloth. The amazing Quiet Cloth is just about completely silent.

The 2000-cubic-inch pack fits everything you might need for a day on the trail. The outside water-bottle pocket can even hold a lens. **Contact:** Fieldline, (805) 529-6734.

The INVISIBLE Hand



Use a remote trigger to capture otherwise impossible shots

By Wes G. Pitts



Nic Bishop

Wary of humans, many a beast will show neither horn nor tail if they sense our presence. Even those wild creatures that will tolerate being photographed behave differently when aware that they're being observed. There are other situations when, for reasons of safety or impracticality, you simply can't be present to take the photograph yourself.

To capture those animals that move faster than the eye or which insist on seclusion, you'll want a remote triggering system. This device is basically a small control box that attaches via a cable to either your camera's remote shutter release or flash. It uses a sensory system to detect the presence of an animal and then releases your shutter.

With this equipment, you'll be able to photograph wildlife in a completely new way. You might use it to snap photos of raccoons scavenging in your backyard at night. Maybe you'll use it to freeze a hummingbird in flight at a feeder. Or perhaps you'll head out in search of a tiger's water source.

If you can identify a food or water source or a common path for a given animal, a remote trigger will allow you to get the photo without disturbing the animal. *National Geographic* photographer Nick Nichols remarked about this particular benefit of the remote trigger in our interview with him: "The remote shots [of the tigers] were particularly exciting because I knew they captured the tiger on his own terms, not reacting to the intrusions of people." (See "Tiger Beat," page 46.)

Remote triggers can also be particularly useful for photographing at night. Though the human eye isn't optimized for night conditions, the trigger's sensors will be unaffected. Plus, these systems work with either infrared or laser light as the tripping mechanism, so the beam itself won't be visible.

There are two types of sensors used in remote triggers: light emission and sound reception. Both of the remote trigger systems that we'll look at here—the Woods Electronics Shutter-Beam and LPA's Wave Sensor from Bogen—can work with either

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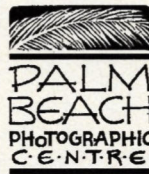
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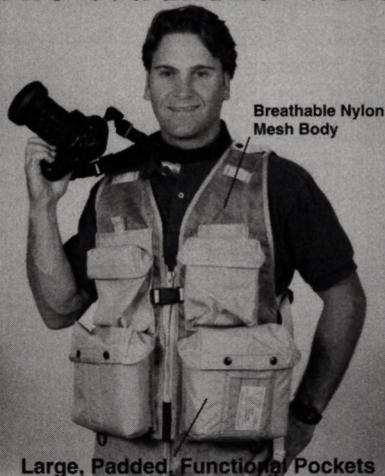
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light or sound as the trigger agent.

Light emission or beam-activated triggers relay a constant stream of light to a reflector and back again. When the beam is broken, the trigger is actuated. Sound-activated triggers use a microphone with adjustable sensitivity to monitor decibel levels and respond by releasing the shutter when ambient noise rises above a predetermined threshold.

The trigger response can be set on a variable delay to allow your subject to move past the sensor before the picture is taken. When planning, you must also take into account the delay inherent in your camera's operation. Timing will likely be the most difficult part of using a remote system, and your photographs will benefit from trial and error.

The other key strategy involved is in the positioning of your camera. For instance, if you're trying to get a shot of a hummingbird using a feeder in your yard, you'll first need to observe how the bird approaches the feeder. Then imagine the photograph that you want: angle of view, composition and background will all play a part in determining where you place the camera, trigger and how you adjust the trigger's settings.

This process is perhaps best visualized if you think of it as photographing a location rather than a subject. Base your plans on careful observation of your subject's habits, and you can be fairly confident of

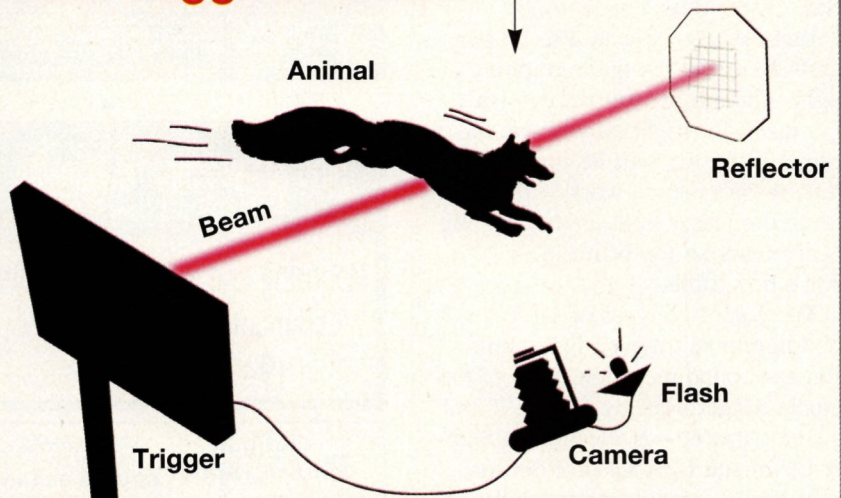
when and how your subject will arrive at the location. If you've set up the shot correctly, the remote trigger will get the picture.

The Shutter-Beam from Woods Electronics relies on an invisible infrared beam or an internal microphone to detect environmental changes. Either can be adjusted for sensitivity. At one extreme, the beam can be set to respond to a hair passing through it. Similarly, you can set the microphone to ignore constant background noise levels, saving film and power by eliminating a false trigger. Several LEDs on the front panel let you know the unit's status, so you can monitor from a distance with binoculars.

A make/break switch on the Shutter-Beam allows you to determine if the unit should respond when the beam is broken or wait until the beam is restored. Another nice feature is the output pulse setting, which will fire your camera's shutter continuously for a preset duration, letting you take advantage of a rapid sequence shooting mode if the camera is so equipped.

LPA's Wave Sensor from Bogen also employs an internal microphone for sound detection, but uses a slightly different light system. Instead of an infrared beam that's sent from the unit and reflected back, the Wave Sensor has an internal light receiver that works with a small, external laser device. An

How Triggers Work



optional second laser is available, allowing you to create an intersection with the two beams. The advantage to this design is the ability to pinpoint a target location where the beams cross, a more precise location than any interruption along the length of a single beam.

These devices are powered by either standard commercial batteries or an AC power source. Both systems have a trigger lockout function to force a pause after each exposure. This lets your flash completely recycle between shots, conserving power as well as film. They also provide the option of a variable delay from the time the system is tripped to the actual release of the shutter. With this feature, you can place your triggering system at a distance from your camera: the delay gives your subject time to move into the field of view.

A remote trigger approach to wildlife photography will allow you to use a wide variety of lenses because the camera can be placed very close to your target location. Wide-angle lenses will work particularly well for this type of work, giving you some latitude with your subject's position relative to the camera. They'll also create a more interesting background for your subject, expanding the confining frame associated with telephoto lenses.

Many photographers who often do this type of work suggest setting up a dummy camera a few days before to allow your subject to get used to a new presence on the landscape. After a brief adjustment period, your subject will decide that this new object isn't threatening, and you'll be able to swap the dummy for your real gear. This will be particularly important if you mount your camera and sensor near a bird's nest or feeder or in similarly tight quarters where the animal is sure to notice.

With a measure of planning and experimentation, you'll be able to get photographs of wildlife that would truly be impossible without a remote triggering system.

For more information, contact:
Bogen, (201) 818-9500, www.bogenphoto.com; Woods Electronics, (619) 486-0806.

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Don't let the holidays catch you by surprise. Take a look at some of the great gift ideas we've put together on these pages. This year, we have a wide selection, everything from outdoor gear and apparel and travel packages to computer software and more. So use this guide to find unique and exciting possibilities for your favorite photo and outdoor enthusiasts (or even for yourself), gifts that will brighten the holidays for everyone.

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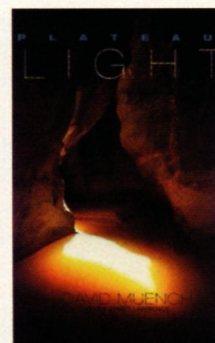
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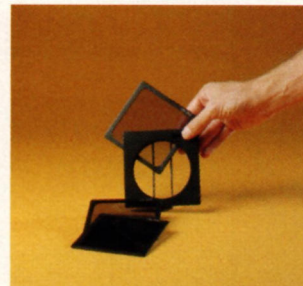
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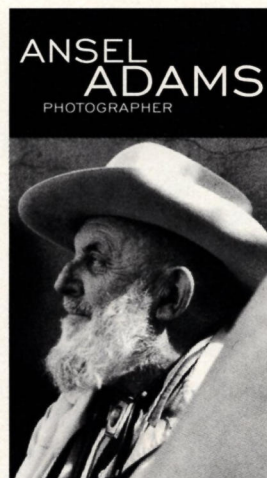
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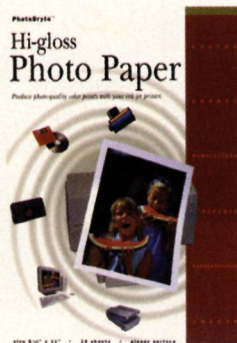
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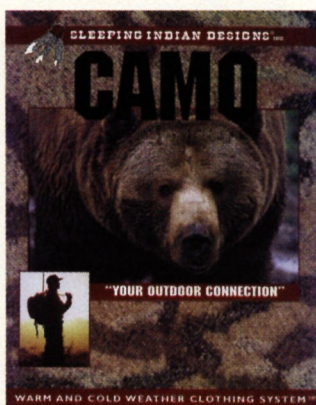
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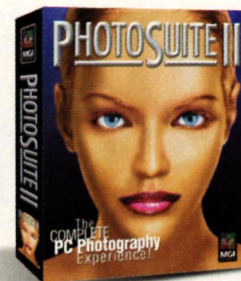
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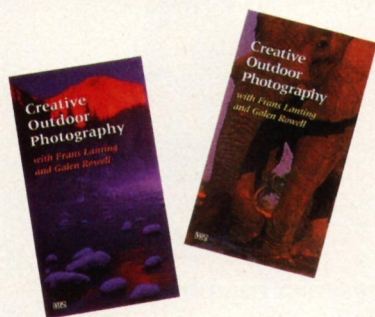
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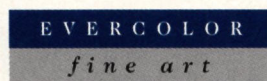


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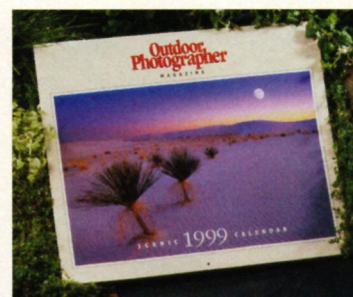
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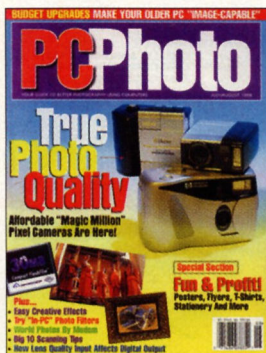


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TIGER BEAT

(Cont'd from page 55)

inches from the tiger's face! I get really bored with the telephoto look because you don't include any environment. That was the source of the variety for our tiger story.

In addition to stills, we took video. On tape, we saw Charger stay put for 36 frames, not budging, not blinking, and then going to sleep. The sloth bear always ran away. One flash and he was gone. The monkeys didn't care. The leopard was very suspicious, but he's on edge anyway because he's wondering, "Where's the big guy?" The park is filled with predators, so everybody's nervous except number one, the tiger. It has no enemies except man.

Outdoor Photographer: You could do a whole book on remote photography.

Nichols: *The Year Of The Tiger* book is an outgrowth of this assignment; there's a whole section that pays homage to the first man, named Champion, who in the early 1920s in India used camera traps with wires and flash powder. He'd get one shot and risk burning down the forest. Frans [Lanting] and I started sharing information with each other, but Frans didn't share as much as he should have (*smiling*). When I used the urine of a leopard to bait my traps in Africa and told Frans about it afterward, he never batted an eye. He had already been using it.

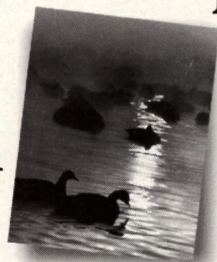
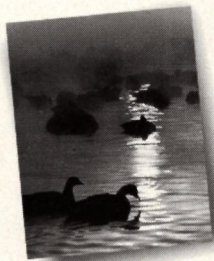
Outdoor Photographer: Today's sophisticated and portable electronics, from small flash units to digital triggers, bring to light incredible new possibilities for wildlife photographers.

Nichols: There's a host of creatures that you can now photograph on their own terms that were largely unavailable before. And, if you can make the camera see the way you do, it's every bit your shot. With me, I like dusk light with flash and movement. There's a picture in my article of a tiger jumping in mid-air. It took us three months to get that frame, and it counts!

Next, I plan to do the Komodo dragons. I can put the camera in their den, you know, really dangerous places you'd never dream of going yourself. We've got technology now so that I can set up a remote camera to shoot like Nick Nichols. It has opened up a whole new world of natural history photography for me.

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For more information, contact: Park County Travel Council, 836 Sheridan Ave., P.O. Box 2454, Cody, WY 82414, (307) 587-2297, fax (307) 527-6228, e-mail: cody@codychamber.org.

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For more information, contact: North-Light Photo Expeditions & Workshops, 96 Gordon Rd., Middletown, NY 10941, (800) 714-1375, (914) 361-1017.

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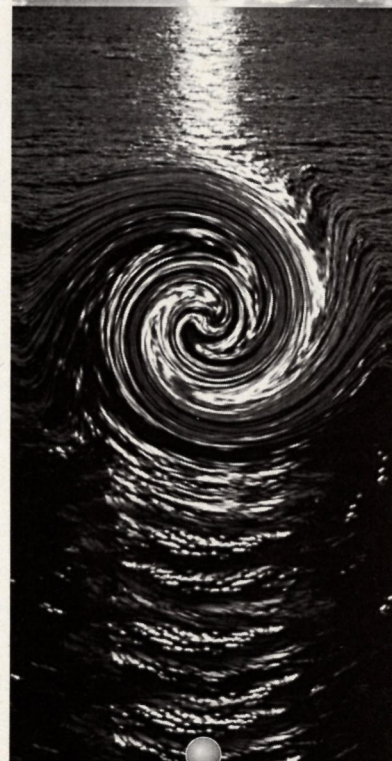
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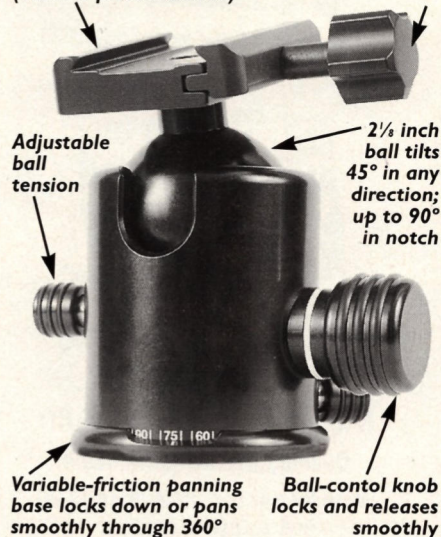
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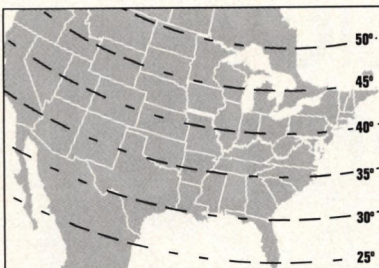
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SUNRISE/SUNSET

Latitude	Dec. 5	Dec. 12	Dec. 19	Dec. 26
25° N	R-114 S-246	115 245	116 244	116 245
30° N	R-116 S-244	116 244	117 243	117 243
35° N	R-112 S-243	118 242	118 242	118 242
40° N	R-119 S-241	120 240	121 240	120 240
45° N	R-122 S-238	123 237	123 237	123 237
50° N	R-125 S-235	126 234	127 233	127 233
55° N	R-130 S-230	132 229	132 228	132 228
60° N	R-138 S-223	140 221	140 220	140 220
65° N	R-151 S-209	154 206	156 205	155 205
70° N	R- --- S- ---	--- ---	--- ---	--- ---

FULL MOONRISE/MOONSET

Latitude	Dec. 1	Dec. 2	Dec. 3	Dec. 4
25° N	R-077 S-281	073 285	070 289	069 291
30° N	R-077 S-281	072 286	069 290	067 292
35° N	R-076 S-282	071 287	068 291	066 293
40° N	R-075 S-283	070 288	066 293	064 295
45° N	R-074 S-284	068 290	064 295	062 297
50° N	R-072 S-285	066 292	061 297	059 300
55° N	R-070 S-287	063 295	058 301	055 305
60° N	R-067 S-290	058 299	052 306	049 311
65° N	R-062 S-293	052 305	044 314	039 320
70° N	R-055 S-300	041 315	027 330	016 343

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◐ Last Quarter	Dec. 10
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PHOTO ADVENTURE

(Cont'd from page 23)

first day's orientation. Last August, Barbara and I took off on our own in a rented Suburban after getting the necessary permit to enter the seal blinds from the local National Marine Fisheries office. The benefits of not standing atop a cliff with 15 other photographers trying to photograph flighty puffins perched just below the edge may sound obvious, but it's the unexpected that makes venturing out on one's own most worthwhile.

One rainy day, I was the only one out at the Zapadni bird cliffs, seated on a small ledge in the lee of the wind. After using my 500mm lens for puffin and murre portraits, I switched to an 80-200mm f/2.8 and the new Fuji MS100/1000 film for puffins in flight. Soon, I had seemingly merged into the cliff with the birds ignoring me. But they all came to attention when something dark moved along a long ledge just below me on the cliff that overhung the sea. I got one perfect frame of an Arctic fox stalking a murre before the sound of my shutter sent the animal scurrying out of sight.

Only the birds within reach of the fox flew off, but a massive departure a few minutes later surprised me. Even the pair of crested auklets anchored in a nearby rock crevice disappeared. Then I heard voices. A tour group of dedicated birders peered over the edge and walked on.

My assignment in the Pribilofs was for a World Wildlife Fund book that will document the Global 200, a group of ecoregions carefully selected to represent most of the links of biodiversity on the planet. I needed images that gave a sense of the Bering Sea region, rather than just tight wildlife portraits. After four days of rain, my opportunity came when the fifth day since May dawned clear. Before sunrise, I was miles out beside a bird cliff, ready to capture its teeming profile against the expansive sky and sea. By the end of the day, I had shot 28 of a total of 60 rolls. The next morning, our return flight made three missed approaches before landing in the rain on the gravel airstrip within the legal minimum overhead visibility of 80 feet. **or**

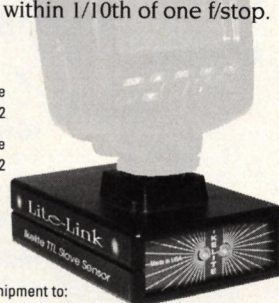
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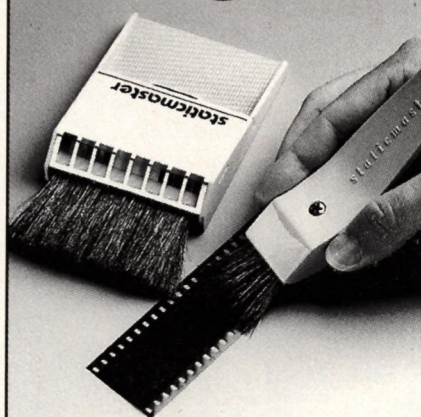
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(Cont'd from page 76)

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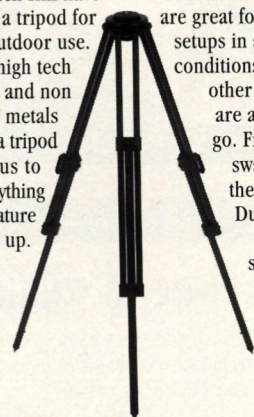
If you ever want to know how cold it really is, you'll appreciate **Brunton's** new **WindWatch**. With a steel impeller, rugged ABS plastic casing and oversized LCD readout, the WindWatch will display wind speed in mph, knots, Beaufort, kmh and m/s while also displaying the temperature and calculating the wind chill factor.

The **North Face's Cerro Torre Jacket** with Polarguard 3D insulation is so lightweight and packable that it makes a great layering jacket or, worn alone, a wind-resistant sweater. The high-tech insulation is the highest lofting and most compressible synthetic insulation ever made. It even outperforms goose down in wet weather. The shell is light, with breathable double ripstop nylon for durability, and features two insulated hand-warming pockets that can also be zipped up for storage. Cuffs made of Elastic Supplex Taslan ensure that cold air is sealed out.

Woolrich may be known for its high-quality wool jackets and sweaters, but the company also makes warm, plush synthetic piles. Its **Sherpa** and **Berber** piles are a dense configuration of tiny fiber bundles for efficient trapping of warm air. They come in

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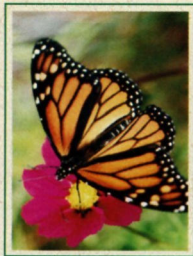
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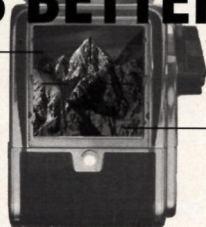
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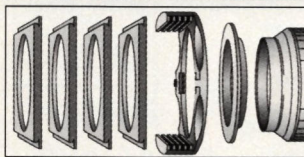
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	A	P
Filter Holder — With Book, & Lens Cap	5.95	—
Adapter Rings — 40.5, 46, 49, 52, 55, 58, 62mm	Each 3.95	—
B&W FILTERS — Yellow, Orange, Red, Green, Sepia	6.50	8.95
Conversion Filters — 80A, 80B, 80C, 82A, 82B, 82C, 81A, 81B, 81C,	6.50	8.95
Conversion Filters — 85A, 85B, 85C, FLW, FLD,	6.50	8.95
Diffraction Filters — 2X, 4X, 36X, Star/Diffraction 4X, 8X	11.95	—
StarBurst Filters — Star 4, 6, 8	8.95	—
Center Spot Filters — 1, 2, Gray, Violet, Green, Orange, Blue, Red	6.50	—
Wide Center Spot Filters — 1, 2, Gray, Violet, Green, Orange, Blue, Red	6.50	—
Oval Center Spot Filter — 1, 2, Gray, Blue, Red	6.50	—
Diffusion & Fog Filters — Diffuser 1, 2, / Fog 1, 2	7.95	9.95
Color Net Filters — White, Gray, Violet, Green, Orange, Blue, Red	7.95	—
Close Up Filters — +1, +2, +4,	7.95	—
Graduated Filters — Light Gray, Dark Gray, Light Blue, Dark Blue, Light Tobacco, Dark Tobacco, Light Mauve, Dark Mauve, Light Red, Dark Red, Light Green, Dark Green, Light Yellow, Dark Yellow,	8.95	11.50
Graduated Sunset — 1, 2,	8.95	12.95
Graduated Soft Filters — Soft 1, Soft 2,	7.95	—
Neutral Density — ND2X, ND4X,	6.50	7.95
Sky Light	4.50	Multi Image 3, 5, 7,
Linear Polarizer	10.95	Circular Polarizer
Split Field	8.95	Speed
Double Mask 1, 2,	8.95	Double Exposure
Polyester Color Set	14.95	Gel Holder
Conversion Set	24.95	Pre Shaped Frame
		9.95

■ Protectafit Filter Management System
Pro-Optic® Filter 'A' Size Kits
Pro Optic Starter Pack Consists of Filter Holder, Protective Lens Cap, 42 Page Color Brochure, Filter Pouch, Star 6 Filter #58, Close-Up +4 #104, Grad. Light Blue Filter #122, SkyLight Filter #23, ... **34.95**
Pro Optic Bright Light Kit Consists of Filter Pouch, Star 4 #57, Star 6 #58, Star #60, 36x Diffraction #42, Star 8 w/Diffraction #44, ... **44.95**
Portrait Kit Consists of Filter Pouch, Diffuser 1 #83, Diffuser 2 #84, Center Spot 1 #60, Center Spot 2 #61, Grey Center Spot #63, 81C #28, ... **39.95**
Landscape Kit Consists of Filter Pouch, Grad Diffuser #135, Fog 1 #150, Sunset 1 #197, Grad light Grey #120, Grad Dark Tobacco #125, ... **39.95**
Black and White Kit Consists of Filter Pouch, Yellow #1, Green #4, Orange #2, Red #3, Grey Net #95 **34.95**

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MAINTAINED.

APS FILM			
FUJICOLOR SMART		KODAK ADVANTIX	
D50 100 15 Exp. 3.29	100 25 Exp. 2.95	400 25 Exp. 3.89	JX-200 15 Exp. 2.85
D50 100 25 Exp. 4.39	100 40 Exp. 3.79	400 40 Exp. 4.49	JX-200 25 Exp. 3.29
D50 100 40 Exp. 5.49	200 25 Exp. 3.19	B&W 400	JX-400 15 Exp. 4.49
DA 200 15 Exp. 2.85	200 40 Exp. 3.99	25 Exp. 4.99	JX-400 15 Exp. 3.09
DA 200 25 Exp. 3.85	100 25 Exp. 3.59	400 40 Exp. 5.79	JX-400 25 Exp. 3.69
DA 200 40 Exp. 3.99	100 40 Exp. 4.39		JX-400 40 Exp. 4.99

APS MAILERS			
KODAK		FUJI	
APS-15 Exp. 7.79	APS-15 Exp. 7.79	APS-15 Exp. 7.49	
APS-25 Exp. 8.99	APS-25 Exp. 8.99	APS-25 Exp. 8.99	
APS-40 Exp. 13.69	APS-40 Exp. 13.69	APS-40 Exp. 13.49	

ILFORD			
Black & White Roll Film		Black & White Sheet Film	
Film Type	ASA	24	36
PanF Plus (50)	2.99	1.99	26.95
PP4 Plus (125)	1.99	2.59	23.75
XP-2 (400)	2.35	2.64	1.99
XP-2 Super (400)	2.69	3.49	2.29
HP-5 Plus (400)	2.09	2.39	1.85
Delta (100)	2.30	2.39	2.39
Delta (200)	2.45	2.39	2.39
SPX 200 Infrared	5.75	4.95	
ORTHO			

POLAROID			
INSTANT PACK FILM 35X44		INTEGRAL FILMS	
88 Single (10)	13.99	Captiva Single (10)	10.25
100 Single (8)	13.49	Spectra Platinum (10)	9.99
665 Single (8)	8.75	Time Zero (SX70) (10)	9.95
667 Single (8)	7.29	600 Platinum (10)	9.99
669 Single (10)	10.99	600 B&W (10)	11.49
Pro Vivid 689	10.19	600 Write On Film (10)	11.99
Pro 64T Twin (20)	27.90		
Polaroid Pro 100 (679)	21.98		
Polaroid Pro 100 (664)	21.98		
Polaroid Pro 400 (672)	23.90		
Fujifilm Pro 100C	10.19		

35mm AUTOPROCESS SYSTEM			
35mm Power Processor	249.95	52	20
35mm Auto Processor	99.50	52	20
Illuminated Slide Mounter	14.95	53	20
Slide Mounts (100)	5.99	54	20
Image Transfer Kit	34.95	55	20
Creative Users Video Tape	9.95	56	20
Black: Polaroid Transfers		57	20
INSTANT SLIDE FILM		58	20
Polachrom (HC)	11.49	59	20
Polachrom (CT)	11.49	60	20
Polachrom (CS)	11.49	61	20
HCP chr (HC)	12.95	62	20
Polablue (BP)	12.29	63	20

FILM ACCESSORIES			
Film Leader Retriever	4.95	X-Ray Film Shield (60)	19.95
X-Ray Film Shield (22)	10.95	Condura Film Guard (60)	32.95

Adorama Bulk Film Loader			
Accepts bulk film rolls up to 100'			
Has a deluxe counter to let you know how many feet of film are left in the loader			
28.95			
Adorama Bulk Film Loader with 20 Reelomatic Cassette	34.95		

KODAK			
Re-loadable CASSETTES			
Kodak EA 99 100 pcs.	93.95		
Plastic EA 45 100 pcs.	39.95		
Metal EA 32 100 pcs.	30.95		

BULK LOADERS			
Adorama Bulk Loader	28.95		
WATSON Bulk Loader	15.95		
LYONS Bulk Loader	24.95		
Alden Bulk Loader	29.95		

Kodak			
24X	36X	120	220 PP
SRG 160	3.19	9.68	3.79
SRG-3200	6.99	13.48	7.99
Impress (50)		4.69	16.38
Infrared (50)			6.49
Chroma R 100 Film - 36X	2.99		5.95

Print Film			
36X	w/Proc.	120	220
Super VX 100	1.79	10.18	2.55
Super VX 200	1.89	10.28	
Super VX 400	2.19	10.58	3.11

AGFA			
AGFAPAN (B&W)			
APX 25 2.75 1.90			
APX 100 2.75 1.90 23.95			
APX 400 2.75 1.95 23.95			
Scala 200 7.25 4.95			
Scala Master (36/120)	5.99		

AGFACHROME (Slide)			
RSX 50 4.89 3.39			
RSX 100 5.45 3.69 71.95			
RSX 200 5.89 4.09			
CTX 100 4.49			
CTX 200 4.89			

AGFA 4x5 Sheet Film			
Sheets	APX 100	Scala	RSX 50 RSX 100 Optima 100
10	16.95		15.75
25	11.95		59.95
50			64.95

KODAK FILM

COLOR PRINT FILM 35mm

Film	ASA	135-24	135-24	135-36	135-36
		ASA	ASA	ASA	ASA
GA (100)	1.59	2.99	8.08	9.48	2.09
GB (200)	1.99	3.49	8.38	9.38	2.49
GC (400)	2.09	3.89	8.58	10.38	2.49
GT Gold Max (800)	3.95		10.44	3.99	5.39
Royal Gold RZ (25)	-	3.89	-	10.38	-
Royal Gold RA (100)	-	3.39	-	9.88	3.99
Royal Gold RB (200)	-	3.95	-	10.44	4.59
Royal Gold RC (400)	-	4.39	-	10.88	4.89
Royal Gold RF (1000)	-	5.29	-	11.78	5.99

SLIDE FILM 35mm

ASA	135-24	135-24	135-36	36X w/KODAK	36X w/Fuji
	ASA	ASA	ASA	ASA	ASA
KM (25)	-	4.59	-	7.96	-
KR (64)	-	4.29	-	7.66	-
KL (200)	-	5.19	-	8.56	-
Elite EA (50)	-	-	-	5.99	-
Elite EB (100)	3.35	4.29	6.72	7.66	3.35
ET (160)	5.29	5.29	8.60	8.66	7.39
Elite ED (200)	4.79	5.49	8.16	8.86	4.99
Elite EL (400)	5.39	5.49	8.76	9.86	5.79

KODAK SHEET FILM USA

COLOR PRINT	4x5	8x10
4106 (VPS)	16.15	73.40
4111 (Versar)	9.95	34.95
4112 (VC Integ)	17.29	75.95
4325 (Comm Int)	17.85	73.50
4329 (PRN)	16.45	73.95
PRT (100T)	16.59	75.95

COLOR SLIDE

ASA	135-24	135-24	135-36	36X w/KODAK	36X w/Fuji
	ASA	ASA	ASA	ASA	ASA
6117 (EPI)	19.95	89.95	73.95	346.95	
6118 (EPI)	17.49	79.49	65.49	307.95	
6121 (CUP)	18.95	88.95	135.95/25	262.95	
6105 (EPI)	17.95	82.95	68.95	319.95	
7058 (EPI)	18.19	82.95	69.95	324.95	
E100 S	17.99	82.95	69.95	322.95	
E100 SW	17.99	82.95	67.95	317.95	

DISPOSABLE CAMERAS

KODAK Fun Savers	Fun Saver 4.39 w/Flash	7.69
Wedding Pack (5)	39.95	
Fun Saver APS w/Flash	10.95	

FUJI Quick Snaps

Outdoor 4.65 w/Flash	7.39
Panorama 7.49 w/Flash	12.99
Water Proof	8.79
AGFA	
Wedding Pack	28.95
Ocean Water Proof	8.49
Easy APS w/Flash	11.99

KODAK MOVIE FILM

PXR 464 (B&W)	10.49
TXR 464 (B&W)	10.49
KMA 464 (silent)	9.95
KMA 594 (sound)	14.95

Scotch 3M

COLOR SLIDE FILM	135-36	With Processing
Scotch 100	2.99	6.28
Scotch 400	4.79	7.58
Scotch 640 T	5.49	8.78

Fujicolor Print Film

ASA	24	35mm	36x	Roll Film
CN (100)	-	1.99	10.38	-
CA (200)	-	2.19	10.59	-
CH (400)	-	2.69	11.48	-
CU (1600)	3.39	9.84	3.89	12.28
Superia Realia (100)	2.59	9.08	2.99	11.38

Superia / Super G Plus Film

Superia (100)	1.89	8.48	2.39	10.78	2.69
Superia (200)	2.25	8.74	2.49	10.88	-
Superia (400)	2.39	8.88	3.09	11.48	-
Super G Plus (800)	-	-	3.39	11.78	-
Superia (800)	-	-	3.99	12.38	-

SENSIA SLIDE FILM

ASA	24X	24X w/p	36X	36X with Processing
RA (100)	-	-	3.29	6.58
RM II (200)	3.09	6.46	3.79	7.08
RH II (400)	4.19	7.66	4.99	8.28

FUJI QUICK LOAD

Film Holder	104.95	RDP II Provia	51.95
RVP Velvia	104.95	RTP 64T	49.95
RAP Astia	51.95		

PRO COLOR PRINT FILM USA 35mm 120/220

Film	ASA	135	36X	135	120	120	220	220	Bulk
P1-100 (100)	3.79	11.78	16.95	-	-	-	-	-	6556
P1N (100)	5.35	13.74	27.25	-	-	-	-	-	5072
P1T (100T)	-	-	-	-	-	-	-	-	5325
VPS (160)	5.39	13.78	26.95	-	-	-	-	-	40.95
PMC (400)	5.69	14.08	28.45	-	-	-	-	-	43.95
PP (400)	5.59	13.98	27.95	-	-	-	-	-	135-S Exp
PJ 400 (400)	3.49	11.88	17.45	-	-	-	-	-	ProPack (10)
PJ 800 (800)	4.19	12.58	20.95	-	-	-	-	-	15.95
PMZ (1000)	6.19	14.58	30.95	-	-	-	-	-	GA-120 USA
PJC (1600)	5.49	13.88	27.45	-	-	-	-	-	1.99

PRO SLIDE FILM USA 35mm 120/220

	ASA	135-36	36X	120 Single	120	220	Bulk
			36X	120 Single	120	220	Bulk
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			36X	120 Single	120	220	Bulk
			36X	120 Single	120	220	Bulk

The TOKINA 400mm f/5.6 AF lens is "Not a new lens but...I really like it."

-B. Moose Peterson
Wildlife Research Photographer



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The AF353 super-mini zoom lens provides a wide range of lens settings from 35mm wide angle to 300mm telephoto, and high magnification of more than 8x. Despite high magnification, body length is astonishingly short 101.3mm. The lens is equipped with a new zoom lock that prevents the zoom section from sliding down due to its own weight when the camera is pointed downwards. It also makes the lens more compact and easier to carry. A metal zoom assembly ensures enhanced, stable performance and durability. In the optical system, the lens contains super-low dispersion FKOI SD glass. An optical system like this and built-in flare cutter give sharper contrast and higher resolution.

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AT-X235AF PRO 20-35mm f/2.8 AF

Focuses extremely quickly. The 20-35 is 4" long tapering out from the lens mount diameter to 77mm. It weighs 585g and is made up of 15 elements in 11 groups incorporating Aspherical elements.

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ATX 304AF 300 F4.0.....	\$60.00
ATX 17AF 17 F3.5.....	\$30.00
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ATX 400AF 400 F5.6.....	\$40.00

NEW LOW PRICE!

ATX 840AF 80-400 F4.5-5.6..\$50.00

ATX 235AF PRO . . 20-35 F2.8.....\$60.00

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The Kenko ProField 70A



PF-70S/70A

Style	Pro Field
Magnification	20-50x
Obj. Dia.	70mm (2.8")
Exit Pup. Dia.	3.5-1.4mm (0.14-0.06")
Angle of View	1.6-0.9 Degrees
Field of View	28-16m (91.9-52.5')
at 1000m (1093yd)	
Rel. Brightness	12.3-2.0
Eyepoint	20.0-15.5mm (0.79-0.61")
Min. Foc. Dist.	8.5m (27.9')
Filter Size	77mm
Length	380mm (15.0")/360mm (14.2")
Weight	980g (34.3oz.)/1000g (35.0 oz.)

Great
Gift Idea!

Samy's Price
\$272⁹⁵

Model #21016 C102-HD Telescope

- 102mm (4") Aperture
- 1000mm Focal Length
- Focal Ratio of f/10
- Fully Multi-coated Optics
- Standard 1 1/4" Accessories include:
10mm Plossl Eyepiece (50x) & Focuser
- 90 Degree Mirror Diagonal (1 1/4")
- 6x30 Finderscope
- Sturdy Adjustable Aluminum Tripod
with Accessory Tray
- Weight 36 lbs.



CELESTRON

Samy's Price
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Call for other
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FAX LINE: 562-494-1575

 **Tokina** SSS Price
\$239⁰⁰

AF-EMZ140

100-400mm
f/4.5-6.7

Maxxum, Nikon AF, Canon EOS



BONUS
HOYA
UV FILTER
included

 **Tokina** SSS Price
\$159⁰⁰

AF-EMZ193

19-35mm
f/3.5-4.5

Maxxum, Nikon AF, Canon EOS



BONUS
HOYA
UV FILTER
included

 **Tokina** SSS Price
\$239⁰⁰

AF-EMZ283

28-300mm
f/4-6.3

Maxxum, Nikon AF, Canon EOS



BONUS
HOYA
UV FILTER
included

 **Kenko**
Vari-Zoom 800

KVZ-T-428

420-800mm
f/8.3-11

Canon FD and EOS, Contax/Yashica, Minolta MD
and Maxxum, Nikon AI, Olympus, Pentax K



BONUS
HOYA
UV FILTER
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Extreme Photography!!

Now get those shots that have always been out of reach. This Kenko 800mm telephoto lens puts you in the picture – outdoor, wildlife, special events – **you're there!**



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 **Kenko**

Wonder Zoom 50

4X Zoom Binoculars
12.5-50x

Ultra compact, easy focus, lightweight, burnished
metallic contour feels custom molded for your hands.



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\$149⁰⁰

ORDER NOW
TO GET
FREE
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(\$40 VALUE)

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Scope Eyepiece

Turns any lens
into a spotting scope

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EOS Rebel QD	227
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EOS Elan IIE QD (\$30 Rebate)	377*
EOS A2E (\$75 Rebate)	447*
EOS A2E (\$75 Rebate)	547*
EOS IX (\$20 Rebate)	287*
EOS IX Lite	237
EOS 1N	\$100 REBATE
EOS 1NRS	\$100 REBATE
FLASHES	IMP. USA
380 Ex	127 165
540 EZ	237 307
ML-3 Ringlite Flash	213 CALL

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Rebel G w/ 35-80 Kit (no case)	297
Rebel G QD w/35-80 Kit (no case)	327
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EOS Elan IIE w/ 28-105 USM Kit	517*
EOS A2 w/ 28-105 USM Kit	737*
EOS A2E w/ 28-105 USM Kit	837*
EOS IX w/ 24-85 USM Kit	607*
EOS IX Lite w/ 22-55 USM Kit	337

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Rebel G	457*	A2	717*
Rebel G QD	487*	A2E	817*
Elan II	557*	IX	547*
Elan IIE	607*	IX Lite	487*
Elan IIE QD	657*	EOS 1N	1397*

CANON AF LENSES

EF LENSES	IMP.	USA
24/2.8	297	359
28/2.8	177	199
50/1.8	67	83
100/2.8 Macro	437	527*
75-300/4-5.6 II	157	183
USM LENSES	IMP.	USA
20/2.8	387	487
28/1.8	367	477
50/1.4	387	497
20-35/3.5-4.5	267	312*
28-80/3.5-5.6	107	117*
28-105/3.5-4.5	217	267*
28-135/3.5-5.6	457	547
75-300/4.0-5.6 II	167	227
75-300/4.0-5.6 IS	397	527
100-300/4.5-5.6	217	277
L-Series 17-35/2.8	1069	1297*
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L-Series 70-200/2.8	997	1259*
L-Series 300/4 L.S.	1267	1447
L-Series 400/4 L.S.	1047	1347
AF 2X Converter	47	57
AF 2X Pro Converter	157	167

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Pronea 6i w/ 1X 24-70 Kit	467*		
FM-2 Black (imp)	357*		
FM-2 Black (imp)	387*		
FM-10 w/ 35-70 & Case (imp)	49		
Nikon 2-Year Extended Warranty	49		
FLASHES	IMP. USA		
SB-28	337 367		
SB-27	147 217		
SB-22S New!	97 127		

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N50	557*	N70 QD	707*
N60	587*	Pronea 6i	677*
N6006	617*	N90s	1037*
N70	667*	F5	CALL

N90s Kits

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LENSES

AF LENSES	IMP.	USA
20/2.8 D	367	427
24/2.8 D	247	277
28/2.8 D	127	147
50/1.4 D	213	243
60/2.8 Macro 1:1	257	337
85/1.8 D	297	347
105/2.8 D	437	587
135/2.8 D	527	677
300/4 D (ED) IF	767	877
20-35/2.8 D	1477	CALL
24-50/3.5-5.6 D	337	327
28-120/3.5-5.6 D IF	327	347
28-70/3.5-4.5 D	237	287
28-105/3.5-5.6 D	127	155
28-200/3.5-5.6 D IF	397	477
35-70/2.8 D	477	607
35-105/3.5-4.5 D	267	277
70-210/4.5-5.6 D	227	277
70-300/4.5-5.6 D (ED)	287	339
80-200/4.5-5.6 D	117	149
80-200 w/ Tripod Collar	697	847
AFS 300/2.8 D	CALL	CALL
AFS 400/2.8 D	CALL	CALL
AFS 500/4.0 D	CALL	CALL
AFS 600/4.0 D	CALL	CALL
AF LENSES	IMP.	USA
35-135/3.5-4.5	367	397
28-105/3.5-5.6	237	337
70-210/4.5-5.6	147	217
300/4 ED IF	817	897
AF 2X Converter	57	57
AF 2X Pro Converter	167	167

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500si	237	800si QD	547*
550si	267	HTSi	277
600si	337	X-370 USA	167
600si QD	367	X-700 USA	229

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XTSi Kit w/ Maxxum 28-80	437
XTSi Kit w/ Maxxum 28-80, 75-300	587
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AF 2X Converter	47		
AF 2X Pro Converter	157		

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ZX-10	217	K-1000	167
500 FTZ	267		
400 FTZ	CALL		
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FA 100-300mm F4.5-5.6	217
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2X Converter	47
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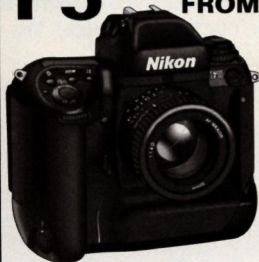
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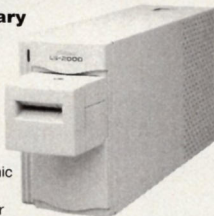
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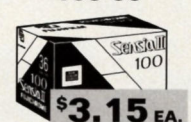
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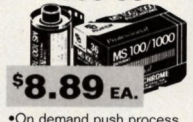
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SP 300/2.8 LD (IF)	2,169.	2,613.	2,899.	2,613.	---
500/8	369.				---
20-40/2.7-3.5	---	671.	671.	671.D	---
24-70/3.3-5.6	---	219.	219.	219.	---
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28-80/3.5-5.6 (Asph)	---	119.	119.	119.D	119.
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28-105/4.5-6.3 (IF)	---	189.	189.	189.	189.
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70-300/4.0-5.6 LD	---	249.	249.	249.	249.
80-210/4.5-5.6	---	129.	129.	129.D	---
100-300/5.6-6.3 Macro	---	189.	189.	189.	189.
200-400/5.6 AF LD (IF)	---	539.	539.	539.D	---
1.4x Converter	---	109.	109.	109.	---
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NEW! 17-35/2.8-4.0	438.	438.	438.	438.	438.	438.
18-35/3.5-4.5	378.	378.	378.	378.	378.	378.
24/2.8	164.	164.	164.	164.	164.	164.
24-70/3.5-5.6	146.	146.	146.	146.	146.	146.
28-70/2.8	303.	303.	303.	303.	303.	---
28-70/2.8-4.0	130.	130.	130.	130.	130.	130.
28-70/2.8	312.	312.	312.	312.	312.	312.
28-105/2.8/4.0 Asph	---	198.	198.	198.	198.	198.
28-105/4.6-6 UC	181.	181.	181.	181.	181.	181.
50/2.8 Macro EX	236.	236.	236.	236.	236.	---
NEW! 70-200/2.8 HSM	751.	751.	751.	751.	751.	751.
70-300/4.5-5.6 DL Macro	---	198.	198.	198.	198.	198.
70-300/4.5-5.6 APO Macro	287.	287.	287.	287.	287.	287.
105/2.8 Macro EX	359.	359.	---	359.	359.	---
135-400/4.5-5.6 APO	498.	498.	498.	498.	498.	498.
170-500/5.0-6.3 APO	610.	610.	610.	610.	610.	610.
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180/2.8 APO Macro	833.	833.	833.	833.	833.	---
180/5.6 APO Macro	344.	344.	---	344.	344.	---
300/2.8	2200.	2200.	2200.	2200.	2200.	---
300/4.0 APO Macro	606.	606.	---	606.	606.	606.
300/4.0 APO Macro HSM	760.	760.	760.	760.	760.	760.
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ITN	---	---	---	---	---	70.50							
PRO BLACK & WHITE FILM													
NEOPAN	400	2.65	11.34	2.34				VELVIA RVP 50	53.95	PROVIA 100	49.95		
NEOPAN	1600	3.70	12.39	---				RTP 64	48.95				
							Quickload Film Holder						104.95

Kodak

COLOR PRINT FILM 35mm				PRO COLOR PRINT FILM/TRUE USA PRODUCTS!						
	ASA	135-24	135-36		ASA	135-36	W/P	120 USA	220 PROPAK	
GA	100	1.99	2.39	PJ100	100	3.99	12.69	---	---	
GB	200	2.44	3.19		PRN	10	5.38	14.07	3.35	32.99
GC	400	2.59	3.39		VPS	160	5.29	13.98	3.29	32.99
ROYAL GOLD					PMC	400	5.69	14.09	3.39	33.99
					PJ400	400	4.59	13.19	---	---
RZ	25	4.08	4.69	PJ800	800	5.99	12.88	---	---	
RA	100	3.55	4.45	PPF	400	5.69	---	3.45	33.99	
RB	200	4.15	5.22	PMZ	1000	CALL	CALL	CALL	CALL	
RC	400	4.55	5.39							
RF	1000	5.19	6.59							

PRO SLIDE FILM -- TRUE USA							SLIDE FILM 35mm			
	ASA	135-36 USA	36X W/ KODAK PROC.	120 USA	220 PP USA	100' BULK		ASA	135-24	135-36
PKM	25	7.99	12.38	---	---	---	KM USA	25	4.59	5.99
EPY	64T	7.99	11.98	4.19	---	81.95	KR USA	64	4.29	4.79
EPR	64	8.99	12.49	4.29	42.99	89.95	ELITE EA	50	4.55	6.38
PKR	64	7.99	12.38	---	---	---	ELITE II EB	100	3.35	3.49
EPN	100	7.99	12.24	4.34	44.45	89.95	ELITE II ED	200	4.95	5.39
E100S	100	7.79	12.18	4.43	43.80	94.95	KL USA	200	5.19	7.39
E100SW	100	7.79	12.18	4.43	43.80	94.95	ELITE II EL	400	6.19	5.99
E200	200	7.99	12.48	CALL	CALL	94.95				
EPT	160	8.55	12.94	4.69	---	98.40	MAILERS			
EPD	200	8.60	12.99	4.60	47.05	98.34	PRINTS			
PKL	200	8.95	13.39	---	---	---	DP-12	4.49	DP-24	6.32
EPL	400	9.35	13.79	5.75	---	114.	DPP-24	7.75	DP-36	8.69
							SLIDES			

BLACK & WHITE - TRUE USA PRODUCTS					M&M PHOTO IS A PROUD MEMBER OF				
	ASA	135-24	135-36	120	220 P/PAK	BULK 100'			
TMX	100	2.69	3.79	2.49	---	35.99	Kodak PRO Products Network		
PX	125	2.57	3.69	---	---	30.00			
PXP	125	---	---	2.55	25.99	31.95	NEW 1/2 GRAIN TECHNOLOGY		
TX	400	2.69	3.69	2.39	---	37.10			
TMY	400	2.88	3.99	2.59	---	36.85			
TMZ	3200	---	4.69	---	---	83.99			
T400 CN (C-41 PROC)	---	4.69	2.99	---	IN STOCK	---			

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Acadia National Park, Maine, Nikon F4, Nikkor 300mm f/4, Slik Tripod, Fujichrome Velvia

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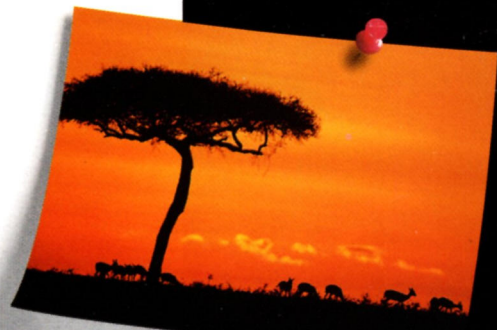
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My Pentax ZX-5N



[My Photo]

My shot of the first sunset we saw in Masai Mara, Kenya. (What a spectacular way to begin a safari.)

This is the metering mode with three options. I chose spot metering to silhouette the acacia tree and deepen the sunset.

This is the Auto Bracketing Exposure Mode that captured my Kenya sky in three distinct moods: deep saffron, fiery orange and crimson.

This is where the exposure memory lock technology is located. I used it to set the sky exposure at its most brilliant moment.

This is the ultra-compact, lightweight design with dial controls. It let me cross the Serengeti like an impala, not like a water buffalo.

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